



## THE AMMONIAPHONE.

The discovery of the telephone, the microphone, the phonograph, the photophone, and various other interesting instruments of the same class is supposed to have created in the minds of certain dabblers in science what may fairly be termed a phonic mania, which it seems is now to be turned to medico-industrial advantage by the introduction of the ammoniaphone, an instrument for the production of artificial condensed Italian air. A somewhat extraordinary memoir "on Dr. Carter Moffat's wonderful discovery" of this instrument has been received from Mr. T. Gilbert Bowick, who describes himself as a "Fellow of the Royal Meteorological Society," which may hereafter be designated with equal propriety the Guild of Science in Nubibus, and the discoverer of this marvellous instrument is found, from his cloudy friend's explanation, to be a well-known explorer's son-in-law's cousin, a circumstance which places his scientific attainments beyond question. Mr. Bowick states that his own observations of various districts of Italy had led him to work out a theory in which meteorological science is deeply interested. With the exception of the plains of Lombardy, the Peninsula, taken as a whole, is distinctly of volcanic origin and character. It has been decisively ascertained that free ammonia exists in the air of Italy to a larger extent than even in the atmosphere of many parts of the sea coasts of other countries. A number of the small lakes are also largely impregnated therewith, and, in fact, volcanic ammonia from the lagoons is an article of regular commerce. We may, therefore, assume that the action of sunlight and heat, largely aided by ozone from the sea air, in conjunction with moisture, sets free the ammonia from the extensive volcanic districts containing a salt of this compound. There is also the formation, collaterally, of an ingredient not previously noticed by philosophers.

As to the explorer's son-in-law's cousin, it appears that whilst in Italy some seven years ago he took the opportunity of making over 70 analyses of the air and dew in various districts, and found in every instance peroxide of hydrogen, and also free ammonia, to a larger extent than exists elsewhere. Dr. Carter Moffat had long previously connected in his mind beauty of tone in Italy and its salubrity as a place for invalids with chemical science, and believed that something in Italian air would be discovered to account for this peculiarity. On returning home he commenced a series of experiments on himself with singularly beneficial results, and after nine years' constant study (some might enquire whether the completion of nine years' study in seven years is not evidence of the "cramming" so much complained of in connection with modern education) he has succeeded in placing before the public an instrument known as the ammoniaphone, which contains an absorbent material saturated with peroxide of hydrogen combined with condensed ammonia and other ingredients, through which a current of air is drawn into the lungs. It is no stretch of imagination to say that this is in reality a highly concentrated artificial Italianised air, in an extremely portable condition. Dr. Carter Moffat's voice was originally very weak, harsh, and destitute of intonation. By the use of the ammoniaphone it has now become a pure tenor of extraordinary range. He noticed that after experimenting on himself for only 14 days an expansion of the chest took place to the extent of over  $\frac{1}{2}$  in., with a feeling of increased lung space and power of voice which has since been maintained. . . . The doctor's voice has been made a tenor of extraordinary range, some 20 notes from the lower F to the high C in the alto, of great beauty, sweetness, and power—the latter note being rung out clear and pure from the chest in the fine devotional air, "I will arise," whence it may be assumed that the explorer's son-in-law's cousin, having determined to arise, Mr. Bowick has kindly volunteered to give him a helping hand.

Logicians have laid it down that he who proves much proves nothing, and probably utilising his knowledge of this Mr. Bowick very properly remarks that the use of the peroxide of hydrogen in the treatment of disease can hardly be looked upon as a novelty in medical science, since in 1860 and 1868 Dr. B. W. Richardson showed that "peroxide of hydrogen relieves the paroxysms of whooping cough, and cuts short the disease more effectually than any other medicine; affords great relief in chronic bronchitis with dyspnoea, and in phthisis operates favourably in the early stage by improving digestion, and giving increased activity to the chalybeaten remedies, while in the advanced stages it affords great relief to the dyspnoea and oppression, acting indeed in this respect like opium without its narcotic effects." Becoming poetic through his high appreciation of Dr. Moffat's discovery, Mr. Bowick declares in conclusion that by means of chemical science we are brought into a fairyland, of which no one knows the extent. We can have, as it were, Italian air laid on at our own doors. The vocalist, the clergyman, the public speaker, and the invalid, all owe Dr. Carter Moffat a debt of gratitude. As a Scotchman, Scotland may well be proud of her son, while other lands can claim him, not as a native but as a benefactor; but readers of the *Mining Journal*, whether they be or be not Fellows of the Guild of Science in Nubibus, will readily comprehend that it is the ironmaster far more than the vocalist or public speaker who will benefit from ammoniaphonic development, since assuming that artificial condensed Italian air is to be laid on to one's own door it is easy to conceive that, even if Dr. Moffat's success be no greater than the late Mr. Holloway's, the demand for iron pipes will be so vastly increased that depression in the iron trade will be known only in history.

## PREVENTING INCRUSTATION OF STEAM BOILERS.

The enormous waste of fuel which results from the attempt to generate steam in a foul boiler has been understood almost as long as the modern system of using steam has been known, and hence innumerable nostrums have been proposed for preventing or removing the incrustation which, with most kinds of water and with certain forms of boilers, is generally regarded as inevitable. The vast majority of these preparations have but very partially answered the object in view, so that when the Disincrustant Marseillais was introduced the inventors had naturally much uphill work to perform in convincing steam users that they had indeed discovered a reliable remedy, and one which was equally applicable in all cases. The material has now, however, had several years' thorough testing, and the satisfaction given has been so general that the justification for the claims made can no longer be doubted—the quantity at present sent out by the manufacturers—Disincrustant Marseillais Company, of Cheetham, Manchester—being now very large, whilst the inevitable renewal of orders proves that it is appreciated. One large user writes that since it has been in use in their boilers there has been absolutely no scale formed, all the deposit being in shape of a fine black powder, most of which leaves the boiler through the blow-off, which is opened for a few seconds regularly at suitable intervals. Previous to employing the Disincrustant Marseillais soda had been used in these boilers, and some of the scale then formed, particularly on the top of the furnace-plates was, though thin, very hard, and had not been all removed. This new compound has almost entirely dissolved or loosened from the plates, and although one of the boilers has been carefully examined, no signs of any injury to the plates has been discovered. The Disincrustant Marseillais has certainly, as far as our experience goes, done its work well, and we understand that it is giving excellent results at sea, the makers, whose factory is at the Knowsley Works, Cheetham, Manchester, informing us that they are doing an extensive business with a number of large shipping companies, and that the compound is also used on numerous stationary boiler plants. The makers claim for their composition, that after all scale has been removed from the boiler plates, a protective surface is formed, which preserves the plates, and does not allow any deposit to collect on them. Of this quality we cannot as yet speak from experience. One point, however, is well worth mentioning—the compound does not appear to in any way affect the boiler fittings, while when soda is being used, particularly in excess, trouble is often experienced with leaky fittings, cocks, valves, &c.

Such testimony as this cannot fail to be satisfactory, for it has been very truly remarked that users of steam-power are unfortunately too familiar with the difficulties and dangers which arise from the formation of scale upon the internal surface of boilers. Some indication of the measure of embarrassment to which they are subject

from this cause is to be found in the innumerable specifics which are advocated and more or less largely adopted for the removal of the evil. It is due in some measure undoubtedly to the multiplicity of these remedies, the utter worthlessness of some, and the proved unsuitability of others to the actual conditions of particular cases that in numerous instances the prevention of incrustation and corrosion is still only "a consummation devoutly to be wished." It is reasonable, however, to expect that among all the compounds offered to the public there must be some that are capable of practically accomplishing what most of them undertake. This patent is a vegetable compound, containing neither free alkali, soda, nor acid, and cannot possibly injure metal. It precipitates all organic matter in the feeding water to the bottom of the boilers, depriving all such substances of their adhesive power, and necessarily deposits them as a soft muddy sediment, which is instantly removed by the blow-off taps, thus rendering the chipping hammer unnecessary. Old incrustation is gradually removed, and eventually disappears altogether. Where pitting or corrosion has set in, this composition is said to be of great value, for it deposits an impalpable thin resinous substance

(a coating) throughout the internal surface of the boiler, which successfully protects the iron from this distressing evil, and promptly arrests it where any symptoms are present. It need scarcely be remarked that at mines and works where the obtaining of good water is practically out of the question, the value of a material which ensures a permanently clean boiler must be incalculable, so that the Disincrustant Marseillais should at least be tested before it is concluded that steam is being generated as practicable.

EPPS'S COCOA—GRATEFUL AND COMFORTING.—"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected cocoa, Mr. Epps has provided our breakfast tables with a delicately flavoured beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette*.—Made simply with boiling water or milk. Sold only in packets, labelled "JAMES EPPS and Co., Homeopathic Chemists, London."—Also makers of Epps's Chocolate Essence.

This Property will command a practical monopoly of the Coal Trade of the Danube, Black Sea, and Constantinople. Income from Contracts offered will amount to £30,000 per annum, equal to over 30 per cent. on the total Capital of the Company after payment of the Government royalty.

A further offer has been received to take the whole production of Coal at a clear profit of 10s. per ton.

# The Iron Gate Coal and Chrome Company (Limited).

Incorporated under the Companies Acts, 1862 to 1880, whereby the liability of Shareholders is limited to the amount of their Shares.

## CAPITAL £100,000, IN 100,000 SHARES OF £1 EACH,

Of which 20,000 are taken by the Vendor in part payment of the purchase-money, and the first issue of 50,000 are now offered for subscription, payable:—5s. per Share on Application, 5s. per Share on Allotment, and the balance, as and when required, in Calls of 5s. per Share, at intervals of not less than three months.

In the event of no Allotment being made, the amount payable on Application for Shares will be returned in full.

### DIRECTORS.

Sir GEORGE INNES, Bart., Richmond, Surrey.

JAMES CROSTON, Esq., J.P., Manchester, and Upton Hall, Cheshire.

Mr. Alderman JENKINS, Higher Broughton, Manchester.

T. SAUNDERS, Esq., J.P., Holland Road, Kensington, W.

Mr. Councillor HUGO SHAW, Manchester.

THOMAS OLDHAM, Esq., Holmfeld, Sale, Manchester.

SOLICITOR—J. H. BOARDMAN, Esq., 41, John Dalton Street, Manchester.

BANKERS—THE UNION BANK OF MANCHESTER AND BRANCHES.

(Messrs. GLYN, MILLS, and CO., London Agents.)

AUDITORS—Messrs. JOHN ADAMSON, SON, and CO., Norfolk Street, Manchester.

SECRETARY (pro tem.)—Mr. F. W. DAWSON.

REGISTERED OFFICES—9, CORPORATION STREET, MANCHESTER.

### PROSPECTUS.

This company is formed for the purchase of concessions granted by the Crown of Hungary, of the mining rights in perpetuity over a district of about 25 square miles in extent, situate on the Danube at Tisovitz and Eibenthal, near the well-known city of Orsova, together with the freehold land at Tisovitz, and the works, houses, offices, and landing-stages erected thereon, and the plant and machinery appertaining thereto, and for working the extensive and valuable deposits of coal and chrome thereon.

The Crown concessions are subject to a Government fee of £2 per annum, and a royalty of 5 per cent. of the net profits on minerals sold and without dead rent, and carry with them the right to fell and send any required quantity of timber, which latter is heavy and abundant. Labour also is cheap and abundant, and there is ample water power for all purposes, and during all seasons.

**COAL.**—This property has been inspected and favourably reported upon by some of the most eminent authorities—namely, Prof. Hull, F.R.S., F.G.S., Director of the Government Geological Survey of Ireland, and previously Government Inspector of Mines in Lancashire, Prof. V. Ball, F.R.S., F.G.S., Director of the Government Geological Survey of India, and Commissioner at the Vienna Exhibition, 1873, Neilson Boyd, Esq., F.G.S., M.E., J. E. Wood, Esq., C.E., F.R.S., Luke Blackwell, Esq., M.E., and others, who state that the coal on this property resembles both in appearance and quality the South Wales steam coal, being peculiarly adapted for use in locomotives, and for steam navigation, a fact that is proved by analysis.

The coal seams are vertical, or nearly so, and crop out on the flanks of the hills, and can be worked by adits, without machinery, for raising or draining. Four of the seams are already proved, and opened out by adit levels. These seams vary in thickness from 4 ft. to 20 ft., and the quality is excellent. Another seam 48 ft. in thickness, is stated to have been discovered, and others are known to exist. It is computed that these seams contain over 100,000,000 tons of workable coal, free from gas or water.

In addition to the ordinary sources of demand for household purposes, railways, flour and other mills, gas, sugar, and glass manufacturers, there are on the Danube 1500 steamers, which are in great measure supplied from depots of English coal at Galatz, Ibrail, Varna, and elsewhere.

Profs. Hull and Ball, in their report state from all they can learn, "there is no port on the Danube supplying coal direct from the mines below Tisovitz" (at which the company's wharf is situated) "and, in fact, there is no coal along or near the banks of the Danube below Tisovitz, points of much advantage to this property," and that "the demand for coal at Tisovitz will always exceed the supply."

These collieries, being the nearest cheap source of supply for vessels navigating, and towns upon the Lower Danube, Black Sea, and Constantinople, will have the whole trade open to them, and no English coal can possibly compete on account of freight and charges, which to Galatz amount to 15s. to 20s. per ton, whilst it is estimated the total cost to this company for coal delivered free on board will not be more than 5s. per ton. The selling price of steam coal at Galatz is stated to be about 35s. per ton, and for native coal further up the river 21s. to 33s. per ton. The supply from the collieries can easily be made equal to 2000 tons per week, and deliveries commenced forthwith.

Coal is sold for cash on delivery at the wharf, but the demand is such that it is frequently paid for considerably in advance of delivery.

The directors have already received an offer of contract for 20,000 tons of this coal per annum, for three years, with a clear profit to the company of 10s. per ton. A further offer has been received to take all the coal that can be delivered at the same rate of profit.

Prof. J. Emerson Reynolds, F.R.S., Royal Dublin Society, gave the following analysis of coal from this property:—Moisture, 0.51; volatile hydrocarbons, 14.32; fixed carbon, 75.86; sulphur, 0.18; ash, 9.13.

**CHROME ORE.**—The deposits of chrome ore on the property are prac-

tically inexhaustible, and of great richness. Mr. J. E. Wood, C.E., F.R.S., states that of the 19 sections into which this property is divided, 15 contain extensive veins of chrome ore, from 3 ft. to 84 ft. in width, and that in five of the sections the ore contains from 50 to 65 per cent. of oxide of chromium. The present value of ore containing 42 per cent. of oxide, in England, is about £7 per ton.

The chrome ore crops out on the surface, and can be worked in open quarry, and the simple process of hand-picking would suffice to ensure a large immediate delivery, very little capital being required, except for actual wages. The inspecting engineers concur in stating that the chrome ore can be delivered on the Danube, free on board at 5s. to 6s. per ton. A firm contract is already offered for 10,000 tons per annum, for three years, with a clear profit to the company of £2 per ton.

### ASSAY OF CHROMITE TAKEN FROM THIS PROPERTY.

"I hereby certify that I have submitted a sample of chromite (chrome iron ore) handed to me to chemical analysis. I find it to contain 52 per cent. of sesquioxide of chromium. I may further state that should this mineral exist in the quantities represented, that this property is a most valuable one."

(Signed) J. MAC IVOR, Consulting Chemist and Mineralogist. Analysis of Herr LOUIS VON MAADIESPACH, Chief Assaying Department, Oravitz.

Chrome ironstone, 50 to 56, and from 29.6 to 46.28 chrome oxide; silver alloyed copper, 17.5 per cent. copper; 62 to 260 ozs. of silver per ton; red ironstone, 57.5 per cent. of raw iron.

The contracts before referred to show an assured revenue per annum, as follows:—From 20,000 tons of coal at 10s. per ton, profit, £10,000; from 10,000 tons of chrome, at 40s. per ton, profit £20,000; total, £30,000.

But beyond this, the demand for coal on the Danube, and for chrome in England, America, and on the Continent being continuous and increasing, and the sources of supply of the latter being few, a ready sale at highly remunerative rates may be always relied upon for a much larger output.

In addition to the coal and chrome, there are on this property vast masses of spathic iron ore, brown hematite, and black band ironstone, and extensive ramifications of argentiferous copper and other minerals, which constitute it one of the most remarkable mining fields in Europe. These rights the directors propose to sell for the benefit of the company as may open, and to confine their operations to the coal and chrome as sources of immediate revenue, free from risk, or anything of a speculative character, or involving large expenditure on plant.

The capital required for additions to plant is very trifling, consisting almost exclusively, as to coal, for wagons to run on the tramway from the adit levels to the wharf; and, as to chrome, for dressing machines, which will, it is estimated, be covered by an expenditure of about £2000.

The expenditure on plant will be strictly limited to the above-mentioned items, and no further expenditure on plant account will be incurred except out of profits.

The purchase money agreed to be paid for the estate and mineral rights is £60,000, to be paid or satisfied as follows, viz., £16,000 in cash, £20,000 in fully paid-up shares, and the balance in coal and chrome from the property. No promotion money has been or will be paid by the company, as all expenses of formation up to the first allotment will be paid by the vendor.

The only agreements entered into are one dated 23rd October, 1883, and made between Thomas Bryant of the one part, and F. G. Dawson of the other part, and one dated 1st December, 1883, and made between F. G. Dawson, of the one part, and Henry Pellow, as agent for and on behalf of the company of the other part.

Copies of the reports, memorandum, and Articles of Association, and of the agreements above-mentioned can be seen at the offices of the company's solicitor. Prospectuses and forms of application for shares may be obtained from the solicitor, auditors, the bankers, and also at the offices of the company.

SUBSCRIPTION LIST WILL BE CLOSED ON WEDNESDAY, 30TH JANUARY INST.

Believed to be the Richest Gold Mine discovered for many years; easily accessible, and within only two days' journey of England. A considerable quantity of lode was broken, at 60 ft. deep, well mixed, and samples of about  $\frac{1}{4}$  of cwt. each taken, which have assayed from nearly 3 ozs. to 8 ozs. per ton; other large samples 30 to 1500 ozs. per ton. Some very rich samples can be seen at the office.

# THE OSCAR GOLD MINING COMPANY

(L I M I T E D).

(Incorporated under the Companies Acts, with Limited Liability.)

C A P I T A L £75,000, I N 75,000 S H A R E S O F £1 E A C H.

Payable 2s. 6d. with Application, 2s. 6d. on Allotment, and the remainder, if required, by instalments not exceeding 2s. 6d. each.  
(Of these Shares, 32,500 will be allotted to the Vendors on account of the Purchase, but will not be transferable until a Profit has been made sufficient to pay at least 10 per cent. on the amount paid up on the remaining Shares, as mentioned in Paragraph 11 of the Prospectus).

(If no Allotment is made, the deposits will be returned in full).

DIRECTORS.

WM. DUNN, Esq., Director

J. H. MURCHISON, Esq., F.R.G.S., CHAIRMAN

SAMUEL YORK, Esq., Director

Captain JOHN DAW, Manager of the Bratsberg Mines, Norway.

Major ROBERT HEANE, Junior United Service Club, and Franklands, Burgess Hill, Sussex.

(With power to add two more).

BANKERS—IMPERIAL BANK (LIMITED), Lothbury.

SOLICITORS—HENRY VERDEN, Esq., 14, Great Winchester Street, E.C.

SECRETARY (PRO THM.) AND OFFICE.

MR. C. HARRISON, SMITH, 8, AUSTIN FRIARS, LONDON, E.C.

A Report by Captain Plummer, the eminent mining authority, accompanies the Prospectus, and the following extracts from it will best describe the nature and value of the mine. He says:—

"I had three shots put in (at 60 ft. deep), and after properly mixing the ore brought down by these shots I filled two boxes. I may here remark I saw good specimens of gold quite visible to the naked eye. One box of samples I took from the very fine smalls after the shots, and one box of smalls before the shots were fired. Another sample was taken 48 ft. down from surface in the south-west end; it is mineralised slate.

"One sample was taken from the mineral slate at surface, 150 fms. south-west from shaft. All of these samples gave a good show of gold except the last. The ore taken before the shots were fired was very rich in good coarse grain gold.

"I saw at this mine what I never saw before in all my travels—that is, a branch of gold visible to the naked eye, when standing in the rock underground. In the south-west end of the shaft, and about 10 ft. above the bottom, the lode is 3 to 4 ft. wide; in one part of it the gold can be seen and felt projecting from the rock.

"Had this been an established gold mining field one would scarcely know how to fix a value upon it; some parts of the lode are fabulously rich, and this of itself must give it great intrinsic value. Moreover, if the samples I sent you give satisfactory results when assayed, taken from the lode indiscriminately as they were, there can be no need for hesitation.

"I can with the greatest confidence recommend this property. I have never before seen so rich a vein for gold, and if it continues to hold on, as I have every reason to believe it will, there must be a brilliant future for the mines. Should you decide on taking over and working the property, I shall be glad if you will allow me to take an interest in it.

"I have not taken into account the gold you will be likely to get from the present workings immediately the stamps, &c., are completed, as although this of itself will yield a handsome return, I look upon it as of small moment compared with the magnitude of the profits which should be realised when the mine is in full operation.

Captain Plummer adds this Postscript:—

Since writing the report I have seen the result of the assays made by Mr. F. Claudet (Assayer to the Bank of England) of two boxes containing fair samples of lode from the deepest point of the

Ozs. 2 13 0  
mine. These give respectively 8 0 0 or an average of (say)  
10 13 0

5 ozs. of gold to the ton. As my calculations were based on the average of only 1 oz. to the ton, and the cost of extracting the gold is, of course, the same, whatever the yield may be, it will readily be seen how very largely the profits would be increased, basing the calculation on an average of 5 ozs. gold per ton, instead of 1 oz.

B. D. P.

The vendors have handed to the directors copies of Certificates of Assays of stones and samples from the lode, varying in weight from a few pounds to upwards of 3 qrs., made by Messrs. Johnson and Matthey, giving the extraordinary results of 32 ozs., 93 ozs., 101 ozs., 370 ozs., 417 ozs., 1075 ozs., and 1510 ozs. of gold per ton; but these must be considered as selected specimens.

Some very rich specimens can be seen at the office. There are no rents nor royalties to pay, which of itself is an important consideration.

The only agreements entered into are one dated 24th November, 1883, between the said John Daw of the one part, and the said John Henry Murchison of the other part. The other dated 10th December, 1883, between the said John Henry Murchison of the one part, and Charles Harrison Smith, as trustee for the company, of the other part; which said agreements, together with the Articles of Association, can be inspected at the company's office, and applicants for shares will be taken to have notice of the contents thereof.

Copies of this Prospectus, with Captain Plummer's report and Forms of Application, can be obtained at the office of the company, 8, Austin Friars, London, E.C.

The SUBSCRIPTION LIST will be OPENED on MONDAY, the 28th INST., and Allotments will be made according to priority of application.

## CARTAGO (L I M I T E D.).

ABRIDGED PROSPECTUS.

No cash whatever is payable for this valuable property or the work executed.

The vendor, convinced of the value of the enterprise, takes the whole of the purchase-money in shares.

The "Cartago" Gold Mine will, it is considered, prove to be one of the richest mines ever discovered in Venezuela since the discovery of the wonderful EL CALLAO, and so satisfied of this is Mr. A. LICCIONI (Chairman of EL CALLAO, under whose management it has become the most productive gold mine in the world), that he has accepted a directorship of CARTAGO, Limited—the only English mining company in all Venezuela with which (after a long residence in that country) he has allowed his name in any way to be associated.

The original shares in "El Callao," of the nominal value of £420 are now wanted at £44,000 each, and the dividend paid for the month of September alone was £800 per £420 share, equal to over £9000 per annum per share.

In the opinion of those who have seen the "Cartago" Mine it is likely that it may eventually not only rival "El Callao" in wealth, but outlive it in productive power.

The following are the leading features in the "Cartago":—

1st.—The reports are of a highly favourable character as to the richness of the property.

2nd.—The most conclusive evidence of its value is that the vendor takes all the purchase-money in shares, therefore his interest depends solely on the success of the company.

3rd.—A further corroboration is that Mr. A. Liccioni, Chairman of

"El Callao," not only accepts a seat on the Direction of Cartago, but in a letter annexed says:—"My own experience leads me to believe it is very rich. I have not the slightest doubt of good results."

4th.—These remarks, from so reliable and so responsible an authority, speak for themselves, especially as Cartago being only six miles distant from "El Callao," Mr. Liccioni had every opportunity of obtaining reliable information thereon. The gold

shipped from "El Callao" to Messrs. Baring Bros., from January till September of last year, exceeded £336,000 sterling—only nine months' yield.

5th.—"Cartago" possesses the only site for water-power known to exist in the gold fields, sufficient to drive a 50-horse turbine wheel for eight months or 10 months of the year; and this is an advantage of so great magnitude that it is impossible to overestimate it; fully a saving of 50 per cent. in working expenses, as compared with those of other mines in the locality.

6th.—Another great advantage is that Mr. Liccioni's association will secure skill and efficiency in local management, which are so essential to the prosperity of every enterprise.

7th.—It must be remembered that the average yield of gold in the ores of the district may be taken as nearly double that of those of any other known gold field. By crushing 100 tons (2 ozs.) ore per day, the estimated profit would be £165,000 per annum.

If 3 ozs. per ton of ore (only two-thirds "El Callao's" yield), the profits should be.... 227,000 "

## CARTAGO, LIMITED.

Incorporated under the Companies Acts, 1862 to 1880, which limit the liability of subscribers to the amount of their Shares.

SHARE CAPITAL £300,000, I N 300,000 S H A R E S O F £1 E A C H,

Payable 2s. 6d. per Share on Application, and 2s. 6d. on allotment, and the balance, as and when required, by calls not exceeding 2s. 6d. per Share, and at intervals of not less than two months. It is expected that not more than 5s. to 10s. per Share will be called up during the first twelve months.

DIRECTORS.

The Right Hon. Lord CLAUD HAMILTON, P.C., CHAIRMAN.

A. LICCIONI, Ciudad Bolivar, Venezuela, Chairman of El Callao.

Sir WALTER BLOUNT, Bart., Deputy-Lieutenant for the County of Worcester, Brooks's Club, S.W.

The Hon. WILLIAM ANNAND, late Premier of Nova Scotia, Thorndean, Streatham, S.W.

Major W. F. DESPARD, Director Mackay and Revolution Mining Company (Limited).

J. DUNHAM MASSEY, Esq., Director West Callao Gold Mining Company of Venezuela.

CHARLES RAWLE, Esq., Padstow, Cornwall.

BANKERS IN LONDON—THE CONSOLIDATED BANK (LIMITED), 52, Threadneedle Street, London, E.C.

BROKER IN LONDON—WILLIAM R. HEWITT, Esq., No. 2, Pinner's Court, Old Broad Street, and Stock Exchange, E.C.

SOLICITORS—MESSRS. HARPER AND BATTCOCK, 23, Rood Lane, London, E.C.

CONSULTING ENGINEER—J. A. SKERTCHLY, Esq., F.R.G.S., M.E., and C.E.

SECRETARY—MR. F. J. WARNER.

OFFICES—43, NEW BROAD STREET, LONDON, E.C.

Cartago is situated in the Province of Guyana, in the United States of Venezuela, S.A., about six miles in a direct line from "El Callao," and comprises an area of 650 acres, or thereabouts, subject to only a small annual rental of £60 per annum. The concession is held for a term of 50 years, renewable.

Copy Letter from A. LICCIONI, Chairman of "EL CALLAO."

[Copy Translation.]

"CUIDAD, BOLIVAR, October 17th, 1883.

"DEAR SIR,—You ask me my opinion respecting the concession named "Cartago."

"Cartago is situated in the valley of the Mopquia, and the experience of the miners who have prospected it and who are still extracting alluvial gold (or de flor de greda) is, that it is the richest in the region.

"My own experience leads me also to believe that it is very rich.

"I am the Chairman of the National Union Company, which is spending large sums in the same valley, at a short distance from Cartago, and, therefore, I have not the slightest doubt of good results.

"Yours truly, A. LICCIONI."

Wood and water power, the two essentials of economical and successful mining, are in abundance, and the enormous expense (and consequent loss of profit) unavoidable with other companies using steam machinery, &c., may be saved by this company, and turned into dividends.

With the enormous advantages under which this company commences operations, having practically nothing to pay for its property, with its capital intact for working purposes, with the Chairman

In 1875 produced 31,278 ozs. of gold, value £119,508

1876 " 42,542 " 162,545

1877 " 48,168 " 184,041

1878 " 49,638 " 189,658

1879 " 40,308 " 154,010

Gold bars shipped to Messrs. Baring Brothers, bankers, London:—

In 1880 were 53,606 ozs. of gold, value £201,020

1881 " 64,862 " 248,230

1882 " 104,611 " 392,290

In January, 1883, Messrs. Baring Brothers, received 10,245 ozs.

February " " " " 7,592 "

March " " " " 8,536 "

April " " " " 11,273 "

May " " " " 10,984 "

June " " " " 10,489 "

July " " " " 9,058 "

August " " " " 15,659 "

September " " " " 13,005 "

Total..... 86,841 ozs.

Equal to £336,508 for nine months' working.

The dividend for the month of September was £830 per £420 share, and the present value of the £420 shares is £4,000.

In the opinion of those who have seen "Cartago" it is likely that it may eventually not only rival "El Callao" in wealth, but outlive it in productive power.

In mineral extent it is five times larger than "El Callao."

## CARTAGO (L I M I T E D.).

Mr. A. Liccioni, Chairman of "El Callao," has accepted a seat on the direction of "Cartago."

As the extraordinary yield of "El Callao" is not generally known, it will be interesting to give the returns of gold during the past eight years (vide their reports):—

## Meetings of Public Companies.

## GOLD COAST MINING COMPANY.

An extraordinary general meeting of shareholders was held at the Guildhall Tavern, on Jan. 18.—Capt. MOLESWORTH, R.N., in the chair, for the purpose of considering and, if approved, passing the following special resolutions:—

1. The word "work" in the seventh line of Article 24 of the Articles of Association of the company is hereby repealed.—2. The number "18" in the second line of Article 29 of the Articles of Association of the company is hereby repealed, and the number "19" is substituted therefor.—3. The number "53" which is hereby added at the end of Article 66 in lieu of the number "97," which is hereby repealed.—4. The words from "Subject" to "hereof," both inclusive, at the commencement of Article 83, are hereby repealed, and the words "Subject to clause 79 hereof" are substituted therefor.—5. Article 91 of the Articles of Association of the company is hereby repealed, and the following Article is substituted therefor:—"51. At the ordinary meeting in the year 1884, and in every subsequent year, two of the directors for the time being shall retire from office. The directors to retire in every year shall be the two senior directors on the board, and shall be eligible for re-election."—6. The words from "the appointment to" "fixed period," both inclusive, at the end of Article 94 are hereby repealed.—7. That the report of the committee of enquiry be adopted.—8. That Mr. Fitzgerald's seat on the board is declared vacant.

The SECRETARY read the notice calling the meeting.

The CHAIRMAN said he would call upon the solicitor to read the resolutions, and explain the alterations.

The SOLICITOR explained the alterations proposed to be made, some of which were mere printer's errors.

The CHAIRMAN then moved, in succession, the adoption of resolutions 1, 2, 3, 4, 5 and 6.—These were seconded and carried without discussion.

With regard to No. 7, on which it was anticipated that some discussion might arise, it was unanimously decided to pass it by for the moment and proceed with No. 8.

The CHAIRMAN then proposed the adoption of resolution No. 8—that Mr. Fitzgerald's seat on the board be declared vacant.—Mr. STEWART seconded the motion.

In reply to a question it was stated that Mr. Fitzgerald had not sent in his resignation direct, but had sent it through an agent.

The SECRETARY: He has practically resigned, but not legally.—The resolution was carried unanimously.

The CHAIRMAN said the above resolutions must be confirmed at a future meeting, but a sufficient time would be given between this and the confirmatory meeting to give the legal time for any gentleman to send in the name of any shareholder whom he might wish to propose as a director. With regard to resolution No. 7—"That the report of the committee of enquiry be adopted," he had to state that the directors wrote to 18 of the largest shareholders asking them to come and enquire into things, so as, if possible, to give confidence to those shareholders who, not knowing both sides of the question might have the benefit of such report from some of their largest fellow shareholders. Of the 18 so invited only two appeared; one of those two gentlemen thought that the matter had better be settled at this extraordinary meeting which was held to-day, and the other gentleman (Mr. Gunn) decided that he would not take the responsibility of drawing up any report himself. There the matter rested now without the shareholders having had the benefit of any investigation, beyond the reply which the directors made to the shareholders. He might say that in the usual course of events, after the directors had received the accusations of Mr. Joy, and replied to them, it would have been their course to have left Mr. Joy to have answered that reply, but as Mr. Joy had since sent out another circular, in which he stated that he could substantiate everything which had been brought forward, with the exception of the paragraph about the secretary, for which he made an apology, he (the Chairman) had now to state that the board were prepared at this meeting to answer all Mr. Joy's accusations, and to bring proof from Mr. Joy's own letters, and from the letters of others, to show that Mr. Joy's statements were incorrect. But it seemed to him that the great matter they had to look to was the interest of the company, and not to these personal matters. (Hear, hear.)

A SHAREHOLDER: It would ruin the company to go into them.

The CHAIRMAN said that, at the same time, the directors were fully prepared to go into every one of them. They had letters which showed the utter incorrectness of Mr. Joy's statements. Mr. Joy had apologised, and said he was not listening at the board when some of the statements were made and published, and admitted he had made mistakes. But the board, as he had said, were prepared if it were thought right to go into the whole of the statements now before the shareholders. (No, no, and hear, hear.) In the meantime he would say something about the prospects of the mine.

Mr. Joy said the Chairman would be entirely out of order if he did not conclude by moving the adoption of resolution No. 7. He wished it to be moved as he had an amendment to move upon it. At the board meeting yesterday the Chairman stated he was determined that no business should be done with respect to resolution No. 7.—The CHAIRMAN: No, no.

Mr. Joy said the object of that determination was to shut out his amendment. He maintained that due notice had been given of resolution No. 7, and that the Chairman was bound to move it, and someone to second it, and then he (Mr. Joy) could move an amendment and make the explanations which he wished to make. If the Chairman would not move resolution No. 7 he suggested that some public-spirited shareholder should do it.

The CHAIRMAN: It would be useless to move the resolution, as there was no report made by any committee, and the thing has fallen to the ground by itself. (Hear, hear.) I propose to state to you something with regard to the prospects of the company, which are alluded to in the first paragraph of Mr. Joy's circular, and I think such a statement from me would be far more interesting to the meeting than going into the other portions. (Hear, hear.)

A SHAREHOLDER: It would be an obvious folly to propose such a resolution, as no report has been made by any committee, but I think it is desirable we should hear some explanation on the part of Mr. Joy, on the one hand, and an answer from the Chairman on the other. (Hear, hear, and no, no.)

A SHAREHOLDER: I think you should move that Mr. Joy's act is an improper one.

Mr. Joy: You cannot move anything of which notice has not been given.

A SHAREHOLDER: It would be a sad waste of time to go into these matters. (Hear, hear.) I propose that we hear from the Chairman a statement as to the prospects of the company.

Mr. MONTIFIORI thought the whole of the papers which bore upon this subject should be placed in the shareholders' hands. The whole matter appeared to him to be disgraceful. The shareholders seemed to have been misled by misrepresentations. They had the directors quarrelling.

The CHAIRMAN: We are not quarrelling. (A laugh.) One has been quarrelling.

Mr. MONTIFIORI: We were told on the last occasion that we were in a prosperous state. What state are we in now?

Mr. ORLANDO WEBB: Let us understand the position we are in. The true position is this:—We are called together as an extraordinary general meeting to consider certain special resolutions. These resolutions have been dealt with the exception of one, and it is clear, on the statement of the Chairman, that the resolution cannot be dealt with, inasmuch as there is no report of the committee to adopt. (Hear, hear.) How can you confirm or adopt a report which has not been made? (A laugh.) The business of the meeting is really terminated. (Hear, hear, and no, no.) I speak in a legal sense when I say that the business of the meeting is terminated. Of course, gentlemen now present at this meeting can raise any discussion they please, but quite understand this—that any resolution which you propose now is no resolution at all. (Hear, hear.)—Mr. Joy: Exactly.

Mr. WEBB: You may pass a resolution and express an opinion. I will express an opinion. I do not go into one side or another; I know nothing about some of the questions. There has been no enquiry; I think there ought to have been. (Hear, hear.) I very greatly regret the notice calling the meeting did not go on to say that at this time it would have been open for anyone to propose a committee to enquire into these matters. (Hear, hear.) At all events we have no committee, and we have no power at the present time to appoint one. The business, as I have said, has terminated, but it is quite open to us to discuss any matters we may think proper. I should be glad to hear from the Chairman any statement he can make with respect to the prospects of the company, and I think the gentlemen present would desire to hear that. (Hear, hear.) I suggest also, that seeing the disputes which have taken place, and are taking place between the board of directors, I think that as a board, they are bound, in credit to themselves, to resign, and simply to hold that position until another meeting shall be called to appoint other directors; and in the meantime let a committee of enquiry be appointed, and let that committee have power and have the opportunity to recommend the appointment of gentlemen as directors. Quite understand this—I do not for a moment say that anyone of the directors shall be displaced. It is a matter of enquiry. The general body of the shareholders would feel that the Chairman is entitled to his seat. (Hear, hear.) Whether the other gentlemen are it is not for me to say; it is a matter for public enquiry, but when the enquiry has taken place I think the directors should assure us that they are willing to obey, and will help us to appoint such directors as we think proper.

A SHAREHOLDER said he believed the people in Liverpool would not ship the stores till they knew the result of this meeting. The company was short of cash, and if they let things go quietly, and had no committee of enquiry, they might get what they wanted.

Mr. Joy said he thought the object was to prevent him from moving his amendment.

The CHAIRMAN said he had stated that the directors were willing to place their seats at the disposal of the shareholders, awaiting enquiry. The position of the directors had not been a bed of roses. If they thought he wished to continue in the position of Chairman they were very much mistaken; but he was a very large shareholder, and, in the interests of the company, he should like to see peace restored, and confidence given in the company so that they might be able to go on with the company, which appeared to him to be in a most prosperous state, although the funds were low, and it was difficult to arrange matters in consequence of the course taken by Mr. Joy. The directors were as much disappointed as the shareholders.

A SHAREHOLDER suggested that a simple plan to adopt would be to strike out clause No. 7.

Mr. WEBB: It is a mistake to bring this matter forward. We should have a calm and quiet enquiry by two or three individuals, who will ascertain if there is anything wrong or not. (Hear, hear.) I have no reason to suppose that anything is wrong, but I think there ought to be an enquiry of that kind. I think the difficulty might be got over in this way, if you were to move something to this effect—that there having been no report from any committee, that resolution No. 7 be not put. Then Mr. Joy would have an opportunity of moving an amendment.

A SHAREHOLDER: If there was no report why was that clause put in the circular?—The CHAIRMAN: The notice was obliged to be sent out a certain number of days beforehand. At the date that was printed we sent to 18 shareholders, none of whom were known to me personally, and we thought that

there would be sufficient interest shown by some, at least, out of the 18 to attend a meeting and make a report. We expected that surely five would have attended.

Mr. SNOW: I was asked to attend as one of the largest shareholders, but I declined to do so as Mr. Joy declined to appear.

A SHAREHOLDER: We have heard that the directors are willing to place their seats at the disposal of the shareholders; may I ask whether Mr. Joy is prepared to do the same thing?—Mr. Joy: Yes.

The CHAIRMAN: I am glad to hear it; it will clear the way. I think there are some gentlemen who think it is best to cut these proceedings as short as possible. (Hear, hear.) There must be some gentlemen present who would associate themselves together and form a small committee.

Mr. WEBB said that the proceedings of any committee would be illegal; that was to say, the committee could not bind the company.

The SECRETARY said he believed the directors agreed to abide by any resolution which might be passed.

Mr. SNOW, as representing 5000 or 6000 shares, said it would be better to hear what Mr. Joy had to say.

The CHAIRMAN said the board had no desire whatever to shrink from any investigation.

A SHAREHOLDER said it would be better to hear from the Chairman how the company stood financially, and what were the position and prospects of the company.

The CHAIRMAN said the directors had sent out Mr. Haughton to the mine to report upon matters, in consequence of Mr. Gowans not being able to extract the gold. He believed there was most valuable ore there, but the reason why Mr. Gowans was not able to extract the gold he could not say. By the last letters from Mr. Gowans he had sent home some ore which contained 9½ ozs. and 7½ ozs. respectively. This ore had been submitted to Mr. Knight, an eminent assayer, of Liverpool, who had stated he was quite sure the ore could not be picked, because when he examined it microscopically he was not able to find traces of gold. Mr. Knight had assayed the ore, and had found 9 ozs. of gold and 7 ozs. of gold respectively. The samples assayed were from 10 to 12 lbs. The directors had also letters from Mr. Knight saying how the gold might be extracted. They were aware that the fineness of the gold had been a great difficulty with the reduction officer, and, therefore, the directors had sent out Mr. Haughton, who was a most experienced miner, he having come home from Australia, and been consulted by persons who were bringing out a patent by which he believed they were able to get out of the ore 92 per cent. of the gold assayed. Now, if this company had ore which assayed 9 ozs. and 7 ozs. to the ton respectively, surely that could not be a bad mine. (Hear, hear.) If the Indian gold mines had shown only 1 oz. of gold to the ton, where would their shares have been now? The directors had that day received a letter from Mr. Haughton, which later on he would ask the secretary to read. In it he gave an opinion of Mr. Gowans's work, which the board thought was satisfactory. As regarded the financial position of the company it was this:—The directors had not only been disappointed because the gold had not come home, but they had also been disappointed because they had not been able to collect the money which ought to have come into the company from shareholders who had been unable to pay their calls. That had been a great difficulty, but the directors had endeavoured to battle with it in every possible way. The board had been acting under the advice of the solicitor, and if they had forced matters more than they had done they would have 2300/- in hand. There were 3000 more shares to call up. The circular issued by Mr. Joy almost paralysed the efforts of the directors. People were told to get rid of their shares. It was a most unfortunate thing for the interests of the company that the circular should have appeared at the moment it did, when the prospects of the mine were better than they had ever been before. (Hear, hear.) Mr. Haughton arrived on Dec. 5 at Axim, and at the mine about the 12th; therefore, when he wrote the letter just received he could only have been on the mine about two days, which gave him very little time to report. When Mr. Haughton was before the board someone said:—"I hope you will give a good report," to which Mr. Haughton replied—"I shall give a true and faithful report, whether it is good or bad." (Hear, hear.) The credit of sending out Mr. Haughton was due to Mr. Stewart. He believed the directors had pursued the wisest course. The directors did not see their way at first to send out Mr. Haughton, but when Mr. Stewart pressed them to give up their fees in order to send out Mr. Haughton they consented to do so, and sent him out. (Hear, hear.) The directors had a large interest, and were anxious to see the mine a success. He believed at the present moment the mine was the best on the Gold Coast. (Hear, hear.)

The SECRETARY then read the letter from Mr. Haughton, which is reported in another column.

A long and uninteresting discussion then followed regarding the appointment, and eventually, with the full concurrence of the directors, Mr. NIXON proposed an informal resolution for the appointment of a committee to enquire into the questions raised in Mr. Joy's circular, and those raised in the directors' circular, and other matters connected with the working of the company and other matters which might be brought before it.

Mr. VAN AGNEW seconded the motion, which was put and carried.

Some further time was occupied in deciding who should form the committee, but eventually the following five gentlemen were appointed—Messrs. Gunn, Orlando Webb, Sals, Snow and Nixon.

A vote of thanks was passed to the Chairman for his conduct in the chair, and the meeting terminated.

## ARUBA ISLAND GOLD MINING COMPANY.

The adjourned ordinary general meeting of shareholders was held at the Guildhall Tavern, Gresham-street, on Monday,

Mr. WIDDECOMBE in the chair.

The CHAIRMAN having read the notice convening the original meeting, said the shareholders would probably be aware that the meeting was adjourned on the last occasion of their assembling in order that the accounts for the year 1882 might be more completely made out and audited for their satisfaction than they then were. He was happy to say that since that time the accounts had been audited by Mr. Ford, the duly appointed auditor of the company, and he (the Chairman) could not do better than read the certificate which Mr. Ford had appended to the balance-sheet, which was made up to Dec. 31, 1882, commencing from the incorporation of the company about 10 or 11 years previously. This certificate stated that Mr. Ford had compared the books of the company with the balance-sheet, and had found them agree. He also certified as to the debentures and as to the stores. The Chairman (continuing) said it was suggested at the meeting held recently that the accounts up to the end of 1883 should be prepared and presented to the adjourned meeting, and he was happy to say that after some difficulty and the expenditure of a good deal of time and trouble they had succeeded in getting the balance-sheet made up to Dec. 31 last. Mr. Ford had gone through this balance-sheet with a great deal of care, and had initialled it as correct, and as soon as he was appointed auditor for that year (which he was not at present) he would no doubt have no objection to certify the correctness of the balance-sheet as the auditor of the company.

A SHAREHOLDER asked that the statement should be read.—The CHAIRMAN said the accounts to the end of the past year had only been in their possession half an hour; but he would now read them to the shareholders.

Mr. SOLLAUGER thought the shareholders would like to see the accounts before they passed them.—The CHAIRMAN said that, as a rule, the accounts had never been presented until the meetings.—Mr. SOLLAUGER did not know another joint-stock company where such a practice was adopted as in this company.

The CHAIRMAN added that the accounts had always been presented at the meetings in manuscript, as the articles only required that the accounts should be presented at the meetings, and this had invariably been done. The Chairman then proceeded to read the accounts.

A SHAREHOLDER: What does the company owe now?—The CHAIRMAN: About 2000/-, including the outstanding debentures. Proceeding with the reading of the accounts, the Chairman pointed out that for four years the directors worked for nothing, and when they did take any fees they took them in preference shares at par, some of which he had since sold at 75 per cent. discount. The company had now to its credit about 1751/-—Mr. H. S. EVANS asked whether it was correct, as the accounts seemed to imply that the directors had taken 700/- since the close of 1882.

The CHAIRMAN replied that they had taken 100/- a year each as decided at a meeting of the shareholders.

Mr. DAWSON (director) said the late secretary (who died a short time ago) had been paid 15/- out of the 700. Then there was office rent and various minor expenses. He had always thought it a most absurd arrangement that the accounts should be so late in being presented; and, therefore, every effort had been made to present the accounts for 1883 as early as possible.

Mr. EVANS: Will you have the accounts printed?—The CHAIRMAN: We shall do so with pleasure if you wish it. It is a matter for the meeting to decide.

A SHAREHOLDER: What is insinuated by all these questions? Is there anything wrong?—Mr. EVANS: You don't think I am such a child as to answer such a question at a public meeting.

Mr. DAWSON remarked that the directors' fees were settled at 100/- a year some time ago, and in pursuance with that decision 40/- had been paid to the directors; the late secretary had received 15/-, the office rent was about 100/-, and the 50/-, making up the 700/-, had gone in petty expenses.

Mr. EVANS, in asking that the accounts should be printed before presentation, said he only asked what was done by every joint-stock company in the United Kingdom that he knew anything of.—Mr. DAWSON said the accounts had never been so presented in this company's history.

The CHAIRMAN, after some further conversation on the same subject, said he had already at the previous meeting made all the remarks he thought necessary on the report; and, as he had now read the accounts, he moved that the report and the accounts to Dec. 31, 1882, should be approved.—Mr. EFFINGHAM WILSON seconded the motion.

Mr. MEADOWS TAYLOR asked whether there had been any change in the balance-sheet to the close of 1882 since it was presented at the meeting of which the present was the adjournment?—The CHAIRMAN replied that none of the figures had been changed. What had been done was to put the figures in ink instead of in pencil.

A SHAREHOLDER: Is there sufficient money in hand to meet the debts of the company?—The CHAIRMAN: Yes; quite, with all the accumulations of interest.

Mr. DAWSON said that some of the bonds had not been sent in for conversion, but the funds in hand were sufficient to meet those bonds with the coupons on them. He thought that ought to be considered a very satisfactory state of their affairs. (Hear, hear.) If the shareholders knew the difficulty there had been in pulling the thing through they would consider that the directors' management had been eminently satisfactory. (Hear, hear.)

Mr. EVANS moved, as an amendment, "That the accounts be not passed until they have been printed and circulated amongst the shareholders, and that the meeting be adjourned for a week." He (Mr. Evans) added that Mr. Ibbotson and himself held more shares than the board or any other shareholder.—Mr. ISROTTON seconded the amendment.

Mr. DAWSON said that as soon as the directors had got the company through the breakers into smooth water there was an intense interest shown in the company; but while their efforts were less successful, it was exceedingly difficult even to get a quorum of shareholders to attend the meetings. (

and make it profitable and pay the debts? Well, it is obvious there are two ways in which it can be done; if you will do it there is no difficulty at all, and if you will not find sixpence it is no use taking possession. Somebody must find money, and therefore, the only way would be for the new company to empower to such a limited amount as the bondholders might choose to sanction, the bringing in of the public, by offering to the public an inducement to find the money as a mining speculation. A mere mortgage bond upon the property with, say, 8 or 10 per cent. interest, would not induce the public to subscribe. I put it to all of you—you would not find sixpence upon that security. (Hear, hear.) It is, therefore, suggested that the only way to bring in the public is to give to those who will find what money is necessary a sufficient interest in the mine itself to give them a share in the speculative result which may be hoped for from the employment of the capital. Therefore, what is proposed is this—that whilst a new company should be formed the shareholders should consist of the old bondholders, who are to take shares exactly *pari passu* with their interest as bondholders, and that they should authorise the directors to raise a sum not exceeding—I say "not exceeding"—30,000. It is a limited sum, more than is actually required; but, still, it is desirable that we should not have to come back again in the event of success not being achieved with a smaller amount—that we should raise 30,000, upon mortgage bonds at 8 per cent., giving to each bondholder a share for each £1, which he advances by way of bond; so that the new bondholders would become bondholders at 8 per cent., and for extra profit would share with us in the prosperity of the mine if the finding of the money resulted in prosperity; in other words, they would become shareholders *pari passu* with us, and they would have a preferential security to the extent of the money they find by bonds at 8 per cent. Speaking roundly, that is the scheme which the directors propose to submit to the Court of Chancery. We have every reason to believe that this is a good mine, and that the expenditure of 10,000£ upon it, making, with the 5000£ to be paid to the American creditors, 15,000£ in all, will develop it into a paying position. If so, then the bondholders would be in a better position than under the bonds, for they would have the whole property instead of having only a contingent interest under the bonds. (Hear, hear.)

A SHAREHOLDER said he was pleased to see Mr. Pope in the chair, and he hoped and believed that something could still be done by energy and perseverance.

The CHAIRMAN: If the capital had been honestly employed which was sent out we should now be in possession of a splendid property. Prof. Price, who is thoroughly to be trusted, based his opinion of the mine on the fact that the ore can be readily treated, and the whole secret of our present position arises from the fact that our money was not honestly employed in the development of the property. What we propose to do is of course to secure the honesty of those whom we employ out there. We hope by the employment of a very much smaller sum than has been wasted hitherto to show that the property is all that has been represented to us. The Chairman then read a recent letter from Mr. Guinness, which was of an encouraging character, and in conclusion moved the following resolutions:—"That the bondholders present approve of the scheme suggested by the board—to sell the property to a new company for a sum sufficient in ordinary shares to pay each bondholder the amount due to him *pro rata*, and interest up to March 31, 1884, such new company to undertake to discharge all the other liabilities of the old company, and request the board to obtain the order of the Court to call a meeting to sanction the scheme, and "That the money to be spent in carrying out such new scheme be a first charge upon the proceeds of the sale of the mine should the proposed scheme fail through."

Mr. JENNINGS seconded the resolutions. A short discussion ensued, in which general approval was expressed of the course suggested, and two or three shareholders expressed their obligations to Mr. Pope and the directors for the trouble they had taken in the matter. The resolutions were put and carried with one dissentient.

A vote of thanks to the Chairman and directors closed the proceedings.

#### INDIAN GLENROCK GOLD MINING COMPANY.

An extraordinary general meeting of shareholders was held at the City Terminus Hotel, Cannon-street, on Thursday, Col. HOWARD in the chair.

Mr. SAMUEL JENNINGS (the secretary) read the notice convening the meeting, which stated that the meeting was called for the purpose of considering the advisability of winding-up the company with the view to its reconstruction.

The CHAIRMAN said:—Gentlemen, it will be in the remembrance of the meeting that at the last time the shareholders met together the directors received from them a mandate to do certain work, and I may state in the first place that they have since that meeting steadily devoted themselves to the special points to which their attention was directed at that meeting. It may perhaps be advisable to refer to the history of these companies shortly, from the beginning, in order that the shareholders present may have it briefly in their own minds how the present state of affairs comes about. It will be remembered that the Glenrock Gold Mining Company originally bought the mining rights only over a very large extent of country in which, according to the reports of the Government mining agent, Mr. Brough Smyth, and others, there existed most promising reefs of quartz. After a time it was found that the action of the surfaceholders could be exercised in such a manner as to a very great extent to interfere with the mining operations of the company, and as there appeared to be valuable surface property in the shape of a very extensive forest, besides coffee plantations, the shareholders determined in general meeting to purchase those surface rights, and those surface rights were purchased at a very considerable expense. There is no doubt that had the enterprise been successful the timber so purchased alone would have been most valuable matter. The timber still remains there, and we hope that yet a great deal may be made of it. The South Indian Gold Mining Company did very much the same thing. They commenced by buying the mining rights, and found it necessary to purchase the surface rights. The Trevelyan Company held the surface rights of a portion of their property, which was purchased from the South Indian Company, but only the mining rights as to the remaining portion of their estate. It will be remembered that these three companies have been gradually amalgamated, so that the expenses of management of the office and of everything else are now only a third of what they were when the companies were originally started. In the remarks I make to the company as to what has been done, and as to what the prospects at the surface are, I venture to remind the shareholders that I have twice been out there, that I have spent many months there, and on both occasions without costing the company one penny, so that I speak to you as one who does not speak by the reports of agents or mining captains, and so on; but as one who has seen with his own eyes the property and the works which are going on. It would have been much more satisfactory naturally to the directors if we could have met you with successful results of the operations from which so much was expected; but the directors, in view of all that has passed, feel that they have done all that could be done, and that the present state of affairs is in no way attributable to them, or, indeed, to anything except Nature. The reports from Mr. Brough Smyth and the other experts were that gold reefs were cropping out in all directions. Men who for a number of years had been engaged in mining in Australia went and inspected these properties, and taking pieces off the rock they found gold visible in them, and they found that gold was to be got by crushing and washing, and they naturally came to the conclusion that where there were such evidences of ancient working, and such distinct evidence of the present existence of gold, that it only required sufficient energy and capital to develop a very large industry, and to make the South Wynnaid equal to Balcarat or any of the great Australian gold fields. Nature has proved too much, whether for engineers, miners, or shareholders. The whole country reeks with gold, so to speak, but it is so disseminated a character that no single company of all those started has yet succeeded in finding a paying shoot of gold. Very large sums of money have been expended and sunk. In our own properties alone the amount of money spent in prospecting has been extremely large. Wherever a lode appeared to show extensive works have been carried out to prove whether the lode was a true vein, and improving as it went down. Portions of our estate can only be likened to a cheese that has not turned out well, and which you have often seen riddled by the cheese taster, and when cut open there is hardly an inch that the taster has not been through in one direction or another. That is precisely what has happened in many portions of our property; but the expense of proving these places 100 or 200 yards in the centre of the earth is a very much more extensive operation, and one that takes very much more time than the simple process of tasting cheese, whether good or bad. The result of all this work is to prove that in a very large portion of the properties, although there exists large masses of quartz containing gold, the gold throughout is scattered so sparsely that it does not pay to work it. The present position of the various properties, I may briefly mention, is that in Glenrock property has been thought advisable to suspend all mining work. The Korumba reef, of which the shareholders have heard some very favourable reports, and of which our manager had at one time a very good opinion, has disappeared altogether—there are no symptoms of it in the hard rock. The Plantation and the Agnew reefs are huge masses of quartz, but they contain gold in so small a quantity that it is not remunerative to take it out. In the South Indian the whole of the work that was first done has proved precisely similar. There had been something like 800 or 900 tons of quartz got out, almost all of which will show gold; but the gold is in such exceedingly small quantities that although quartz has been got out it will not pay to take to the mill and treat. Of course it is most disheartening, but it is what no body of men could help. It is one of the misfortunes of fair mining work. I mention it so fully to show you, gentlemen, that if your money has gone it has gone in a legitimate mining adventure which had every appearance at one time of turning in exactly an opposite direction. In Bittulus, from which also the shareholders have had some very favourable reports, the shaft which we were ordered to sink at the last meeting is being rapidly sunk. The reports from that come very differently—sometimes better, sometimes worse. At one time our manager writes in a very desponding way that the quartz has turned bad, and that the reef is pinching out; then news comes that things are improved, but in spite of all adverse circumstances we are getting the shaft down to the depth at which they expect to meet the reef—300 ft. If it does strike the reef, that depth they think upon success as hopeful; if they do not strike it at that depth they can only believe that this reef has pinched out and does not go down. In Trevelyan the No. 1, which was another of the points to which the attention of the directors was especially directed by order of the last meeting, has been steadily going on with, and we are within six weeks' work of reaching the point which Mr. Darlington, whose opinion was taken by the Trevelyan Company before the amalgamation on the point, decided was that to which we ought to go before we finally abandoned it, but I regret to say that so far the operations on that reef are not better than before we commenced driving so low. Before the Trevelyan Company was taken by the Glenrock Company they had entered into what appeared to be a very favourable arrangement with the Dingley Dell Company to treat a very large quantity of favourable looking quartz which was ready for crushing; but the Dingley Dell Company had no capital to put up the mill which they already had, and to try the crushing. A quantity of that stone has been crushed. Like all the rest of the stuff, it contains gold; but the quantity of gold-bearing quartz is, I am afraid, even there—although the cost of mining is less than in almost any other part—not sufficient to pay. About 250 tons of mixed crushing gave 5 cwt. 6 dwts. of gold or pure quality, and 1 ton of pure pyrite gave 1 cwt. 15 dwts. We have since had another trial of picked quartz, which is somewhat better, but it is not, I am afraid, what it ought to be. We have at various times reported to the shareholders that work was being done on the alluvials to see

whether anything could be done with them, and I will ask the secretary to read some extracts from the manager's last letter on the subject of the alluvials. The SECRETARY then read the following report:—

Dec. 22.—Glenrock Alluvials: I regret much we have been disappointed in reaching the gutter of this deposit, but during my absence in England, the shaft having been sunk into hard rock all round, Capt. Morris thought he was low enough to commence driving to reach the bottom, but he was evidently mistaken. Until this is reached and prospected in one place or another in the Glenrock flat I do not consider that the plan has had a fair trial. I would recommend that during the ensuing dry weather we make another trial. Since I last wrote I have had all the jungle cleared round our prospecting shaft down to the river's edge, and I am perfectly amazed at the immense amount of work I found to have been carried on by the old workers. The place was covered by impenetrable jungle, although actually adjoining the coffee cultivation, and from the size of some of the trees in the workings must have been worked many, many years ago. It is simply piddled with sluices, the sides of which are built up in the most approved manner, although some of the boulders built into the walls are large enough to have required almost mechanical power to have moved them. Now, although it is quite possible that all the gold has been removed, it is also possible that the lowest gutter was never reached, or even if it were at this point it might not be lower down the flat, therefore a trial might be made. If we could prove that there is any considerable portion left it would pay to hydraulic.

The CHAIRMAN: So much for the mining prospects. With regard to the surface cultivation, at the time we took over the surface rights the coffee was under lease to certain gentlemen. The Wynnaid coffee has for a very large number of years been cruelly neglected, and it has become rather a standing bye-word that want of capital coffee cultivation in the South-East Wynnaid has been very badly done; and the result is that when the coffee came into our hands at the beginning of the year we had it examined by experts, and a great deal of it has gone so bad that it is considered perfectly useless to waste money in continuing its cultivation. It has, therefore, been considered advisable to abandon certain portions of the coffee plantations, and to devote our attention to better portions of the acreage. The crop of coffee expected this year is about 50 tons valued at 3500£, which ought to leave a profit on the expenses of cultivation of about 1200£. When I was out there I examined the estate particularly with the view of the cultivation of cinchona, which is being very largely grown in various parts, and, as you know, is expected to be in the future one of the valuable products of Southern India. The best parts of our estates have been planted up at an expense of 1150£. The trees take four or five years to grow before they can be touched; but from the time they can first be touched the produce goes on increasing with very little cost for upkeep. This, then, is the position of the property at the present time. But for some time past, as the circular which was sent to you will have brought to your notice, the directors, dissatisfied with the appearance of the mining prospects, were extremely desirous of making the most they could of the extensive surface run of country of several miles in extent, containing ground of all sorts—high ground, low ground, well-watered ground, and everything else; and the growing requirements of the world in the nature of textile fabrics and of the fibre producing them were brought strongly under their notice, and they have felt that it would be a very valuable thing if they could utilise the important estates we hold in Southern India for the cultivation of these plants. Up to a recent time, however, the expense of working the plants and clearing the fibre from the gum and other materials with which it is associated was so great that only the very best fibre-producing plants paid to treat; but within the last 12 months the difficulty has been solved, and there are at least two machines which either alone or in combination will treat the fibre-producing plants of not so high a quality as the true China grass, and produce valuable fibre for the market. The directors might technically have gone into this business under their old constitution, but they were advised by counsel that according to the constitution of the old Glenrock Company they could only carry on surface work, and grow this fibre, and enter into contracts for working it, and so on, so long as they were carrying on *bona fide* mining work, but the moment the mining work was found to be unprofitable and had to be suspended the surface work could no longer be carried on. The opportunity was offered to the company of obtaining on exceedingly favourable terms the exclusive right of some of these patents, and also the use of others, and they felt that it was of such importance to the company that these things should be obtained, and that the fibre should be grown, that they determined to suggest to the company the course which has been shewn forth by the notice that has been sent to you. The change is merely nominal. You have a certain amount of capital left, and we a mandate from the shareholders to sink to a certain depth. You have certain expenses going on there, and with a very slight increase in the expenses this surface cultivation can be carried on, because it can be carried on by native labour and under native supervision, which is not the case with a great deal of mining work, involving, as that does, the presence of highly paid foremen, mining engineers, and so on. The directors felt it was a very good opportunity for the company, for that while completing their examination of their property in the mining direction, they should take the lead in these fibre-producing and cleaning processes, and thus to earn a dividend on the capital which remains in hand. The properties in the Wynnaid would be almost without purchasers at the present moment if the estates came to be offered for sale, because capital is what is wanted in Southern India more than anything else; but you have properties suitable in every respect for growing the rheas. You have water-power and machinery, which only requires some very moderately-priced additions to enable them to treat not only the rheas grown by yourselves, but also that which is grown by your neighbours. I speak of rheas, however, because that is the typical thing. It is China grass, producing the longest and best fibre. We have a variety of rheas growing wild; in fact, it is a perfect pest in the hills of Southern India. It is some what similar plant, producing a very fair fibre, which, with the processes the company has now acquired, they are advised by those best competent to judge, will produce a marketable fibre at a very good profit. We have among other things growing wild a hibiscus. A sample was sent prepared roughly by our manager there, and it was valued at 17£. a ton, and it properly cleaned by the machines which we have now secured a provisional right to use, it would have been worth from 23£. to 25£. a ton. Then we have the white variety of the rheas, already alluded to, worth from 40£. to 45£. per ton, while a very large portion of our ground is well suited to the growth of true rheas, or China grass, besides Manila hemp and other things, which, with the improved machinery and cheap labour at our disposal, will doubtless come in for producing very valuable fibres. The secretary will read you our manager's report on these various articles.

The SECRETARY read the following extracts from the manager's letter:—

Nov. 19.—Wild Plantain: We have very large quantities of this plant available at once, and had any machine we could send home large quantities of fibre directly. I have heard of a fibre worth 50£. per ton, the plant from which it is obtained growing wild all over our hills. I am going to prepare a small quantity (say) ½ ton, and send it home for you to place on the market. The fibre can be got from 6 ft. to 8 ft. long and silky white.

Dec. 17.—Rheas: 1500 plants were put down last week. These are the first planted in the district.

Dec. 24.—I examined our nursery the other day, and am glad to say we have not a failure; the plants up to now seem to be doing very well. A small piece of land close to the nursery will be cleared, and next monsoon cuttings will be taken and planted out.

The CHAIRMAN, continuing his remarks, said it was estimated that with a produce of 10 cwt. to 1 acre (very good authority placing the produce at 2 tons to 3 acres) they would have a profit of 15£. a ton at the least. They proposed to have 300 acres planted up with true rheas, which should alone yield a dividend of 5d. a share on the reduced capital of 200,000£. The processes which the company had provisionally acquired, subject to the approval of the shareholders, were—Messrs. Death and Ellwood's machine (Smith's patent) for the decorticating of every description of fibre-producing plant by the action of water; Messrs. Ekman's patent for the preparation of ultimate fibre from raw fibres by boiling under steam pressure in water containing sulphuric acid in combination with magnesia, also for the conversion of all refuse into pulp for paper-making, the exclusive right to use these machines and processes having been secured within the limits of the South-East Wynnaid; M. Favier's process for the decorticating of rheas by subjecting the green stems to the action of steam; and MM. Fréméy and Urbain's process for the treatment of textile vegetable fibres by subjecting them to the action of caustic alkali and pressure in certain exact proportions according to requirements the rights to use the two latter processes having been secured for the whole of Madras and for the province of Mysore. The Chairman having mentioned that the fibre which would be produced would be available for a great variety of purposes—from cordage to dresses—stated that the expenses of reconstruction would be very small, and concluded by moving the following resolutions:—

"(1.)—That this company be wound-up voluntarily, and that John Turner Hopwood, a director, and Samuel Jennings, the secretary to the company, and they are hereby appointed liquidators for the purposes of such winding-up; (2.)—That the liquidators be and they are hereby authorised to sell and transfer the property, business, and assets of this company to a company intended to be registered with Limited Liability under the title of "The Glenrock Company (Limited)," in consideration of the latter company agreeing to discharge the debts and liabilities of this company, and the costs of and incidental to the sale, and in consideration of 182,428 fully paid-up shares of 1£. each in the Glenrock Company for distribution amongst the shareholders in this company; (3.)—That the liquidators be and they are hereby authorised to enter into and execute such agreements and other documents as they may think fit to carry out the purposes aforesaid."

Mr. HOPWOOD seconded the resolutions.

Mr. BLUMENTHAL: How much capital is left intact after paying the expenses?

The CHAIRMAN: Rather over 39,000£.

A SHAREHOLDER: What extent of land have we?

Mr. BLADON: What is the amount to be paid for these patents? I think the Chairman should give us the exact terms.

The CHAIRMAN: I have all the details here, but I did not like to detain the meeting. For the Favier-Fréme process the price paid is 6000 fully-paid shares of this company. We have those in hand, and it costs the shareholders nothing. In the amalgamation there were certain shares which belonged to us which we can avail ourselves of to pay that without any call upon the shareholders at all. For the Death and Ellwood machine we have the exclusive right, in South-East Wynnaid, and what we have to pay is an engagement to take ten machines at a cost of 100£. each yearly for five years, and then we have the right for the period of the patent, irrespective of further purchases. If at the end of the first year we are dissatisfied we can give the matter up; but during that year every company desirous of using it must come to us. The machines are extremely handy, and can be easily moved. For Ekman's process we have the exclusive right in the South-East Wynnaid by paying a royalty not exceeding 5 per cent. of the value of the material produced, and we have to pay 500£. to stop the formation of a separate company, and to reimburse the expenditure already made. That is the only cash payment at all. The acreage we have is about 5000 acres, 2000 of which are in forest. We propose to devote about 300 acres at first to the cultivation of rheas grass. We have about 800 or 900 acres suitable for the cultivation of true rheas.

The CHAIRMAN, in reply to a SHAREHOLDER, said the coffee now coming for ward was worth about 70£. a ton.

Mr. JOSEPH recommended that the board should turn their attention to coffee, for, speaking as an old planter, he could tell them that that was a profitable crop to cultivate.

Mr. SHEARWOOD objected to the reconstruction of the company, and moved an amendment to the effect that a committee of shareholders should be appointed for the purpose of investigating all matters connected with the formation and

subsequent operations of the company prior to any reconstruction proposed by the board.

Mr. HENDERSON seconded the amendment, and asked if counsel's opinion had been taken as to whether a case could not be sustained against the vendors. In fact, the vendors had appealed to as men of honour to refund some of the money which they had received from the companies for their properties.

The CHAIRMAN, in reply, said that an appeal had been made to the vendors but without effect; indeed, they had received an absolute refusal to entertain such an idea for a moment. The question had been considered more than once as to whether an action should be taken against the vendors for mis-statements; but the opinion was that no such action could lie against vendors, as the information given by the vendors was mainly founded on information derived from Government.

Mr. W. ABBOTT, in the course of some further conversation, supported the reconstruction of the company, and said he was pleased that the patentes of the process for dealing with the rheas grass were contented with so small a remuneration, and with a remuneration so largely contingent upon success. He was also of opinion that no action could lie against the vendors. In fact, some friends of his (leading shareholders in the company) had taken counsel's opinion, independent of the directors, on the point, and that was the result of the enquiry. He was by no means so absolutely despondent on the results of Indian gold mining as such as some persons seemed to be. The latest report from the Indian Consolidated, though not jubilant, was encouraging. If shareholders expected to obtain paying quartz at a depth of 50 ft., of course they were greatly mistaken.

At the close of a long and desultory discussion, the amendment was put and lost, only seven of the shareholders in a full meeting voting for it. The original resolutions were thereupon submitted *en bloc* and adopted.

Mr. HENDERSON desired that his protest should be recorded against the passing of the resolutions.

The Chairman having been thanked for presiding, the meeting was brought to a close.

#### NEW VAN CONSOLS AND GLYN MINING COMPANY.

The third ordinary general meeting of shareholders was held at the City Terminus Hotel, Cannon-street, yesterday,

Mr. PYZEE JONES (the Chairman of the company) presiding.

Mr. JAMES COOPER (the secretary) read the notice convening the meeting. The minutes of the preceding meeting were read and confirmed. The secretary also read the report of the directors, and then said he wished to tell the shareholders what the unsatisfied debts of the old company were. In the first place the directors' fees outstanding amounted to 2311. 5s. 6d.; secondly, the merchants' bills to be paid by the old company, 51. 5s. 6d.; then royalties due, but since paid; secretary's salary, 93. 15

CATHEDRAL CONSOLS MINING  
COMPANY.  
IN 6000 SHARES.

This Mine is situated in the centre of the richest mineral deposits of the known world. On the East, West, North, and South millions sterling have been dug from the various veins or lodes.

The Champion lode of the district passes through the ground, and is from 10 to 11 ft. wide. To cut this rich copper lode at the 80 or below has been the aim of the present shareholders from the starting of the Mine. This will now soon be seen in the cross-cut at the 84 fm. level, and make the Shares well worthy of buying for a great advance.

The Shares are well held by holders, who have gone in for legitimate mining. A plan of the Mine may be had on application to the Secretary,

EDWARD ASHMEAD, Esq.,  
2, DRAPERS' GARDENS, LONDON, E.C.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

**WASTE METAL UTILISATION SYNDICATE (Limited).**—Capital 10,000*l.*, in 500 shares of 20*l.* each. This company has been formed for the purpose of carrying on the business of manufacturing chemists and metallurgists. The subscribers names are Lieut.-Col. John M. Carter, of Whitehall-yard, 2; Edward L. Cleaver, Town Hall, Kensington, 10; Wm. Lichfield, New Broad-street, 1; Wm. Humphrey Waddington, Addington-square, Camberwell, 1; H. Mason, Camden-grove, Peckham, 1; W. Chad, 18, Bishopsgate-street, 1; Frank N. Thorpe, Nelson House, Stoke Newton-road.

**THE CONNAUGHT COPPER MINING COMPANY (Limited).**—Capital 3200*l.*, in 640 shares of 5*l.* each, of which 512 shall be A shares, and remaining 128 shares shall be B shares, formed to purchase mines and lands of Shroglahy, county Mayo. The subscribers (who take one share each) are—W. Davey, Lime Grove, Seaford; H. M'Lean, Old Hall-street, Liverpool; R. Lingham, Irwell Chambers, Liverpool; G. Williams, City Buildings, Old Hall-street; J. Skerrow, Irwell Chambers West; J. R. Burrows, Beaumont-street, Liverpool; M. Boundy, Shroglahy, Ballycastle, county Mayo.

**THE ISLE OF WIGHT SANATORIUM (Limited).**—Capital 20,000*l.*, in 4000 shares of 5*l.* each, formed to acquire the lands and mansion known as Southlands, Blackgang Chine, Isle of Wight, and to carry on the business of a hydropathic establishment. The subscribers are—W. H. Trasher, Park-street, Grosvenor-square, 5; A. S. Ough, Patimer-road, Clapham, 1; G. Marke, Baryworth-road, Loughborough, 1; D. F. J. Henley, Colburn-road, South Kensington, 5; L. Stanistos, Upper Thames-street, 1; E. Horborow, Copthall-court, 1; A. Mitchell Ferndale-road, Clapham.

**BRITISH SPIRAL TELEPHONE WIRE SYNDICATE (Limited).**—Capital 50,000*l.*, in 10,000 shares of 5*l.* each. Formed to purchase the patents and other rights of Mr. Gorham Gray. The subscribers (who take one share each) are—C. Berry, Bentham-road, South Hackney; J. J. Fleming, Elderfield-road, Clapton; D. W. Money, Brixton-road; W. H. Maitland, Thurloe-square; W. Downie, Lorne-road, Upper Tollington Park; W. O. Duce, Leamington House, Wandsworth Common; P. O. Halloran, Avonmore Lodge, Kew.

**THE NEW HOLLINGBOURNE PAPER MILLS COMPANY (Limited).**—Capital 50,000*l.*, in 5000 shares of 10*l.* each. Formed to purchase the Hollingbourne Paper Mills, and to carry on the paper manufacture. Subscribers are—W. D. Edwards, Upper Thames-street; H. B. Bernard, Bedford-place, Russell-square; E. Harris, Cleygate, Esher; W. Tipping, Sevenoaks, 10 shares each. G. Roff, Bedford; R. Kidney, Mayfield-road, Wimbledon; W. H. Pearse, Brown's-road, Surbiton, one share each.

**FLEUSS LIFE-SAVING APPARATUS AND SALVAGE COMPANY (Limited).**—Capital 100,000*l.*, in 20,000 shares of 5*l.* each. To provide divers, firemen, colliers, and others with pure respirable air; also to buy and deal with inventions and letters patent in respect of life-saving apparatus. Subscribers are—C. F. Emmott, Jermyn-street; F. Bocquet, Martin's-lane; G. O. Saunders, Long-acre; A. Thomson, Adelphi-terrace; W. S. Cross, Charing Cross; H. M. Thompson, Regent-street; F. Taylor, Cedars, Brentford, one share each.

**THE STEAMSHIP WILLINGALE.**—Capital 27,000*l.*, 12*s.*, in 256 shares, of 105*l.* 9*s.* 6*d.* each. Formed to purchase the Willingale, and to convey, carry goods, &c. The subscribers are—A. Hunt, St. Helens, 40; H. C. Pelly, Loughton, 2; M. Tract, Chigwell; J. W. Lewes, Great St. Helens; F. Schneider, Elsley-road, Lavender Hill; W. C. Boniface, Great St. Helens; H. R. Barratt, Great St. Helens, one share each.

**JOHN CHADWICK AND COMPANY (Limited).**—Capital 150,000*l.*, in 30,000 shares of 5*l.* Formed to purchase the goodwill, together with the mills known as Tame Side Mills, in Dukinfield, county Chester, Park Hall Mills, Ashton-under-Lyne, county Lancaster, and land around the mills. The subscribers are—W. Chadwick, Woodside, Reddish; J. E. Chadwick, Woodside, Reddish; R. Hobson, Bromborough, Cheshire; J. D. Tunor Hollins, Dukinfield; H. Clegg, Llanfair; J. Jones P. Rodd, Dukinfield; O. Roberts, Westbourne-terrace, Hyde Park, one share each.

**DOLLDON ELECTRIC SHIPS' LOG COMPANY (Limited).**—Capital 15,000*l.*, in 3000 shares of 5*l.* To purchase any invention, &c., in connection with ships' logs. Subscribers are—M. Barryard, Enfield; A. Caesar, Union-road; N. J. Judd, St. Andrew's Hill; G. Parr, Deal; A. Clarkson, Langora-road, Wandsworth; H. Fulton, Salisbury; T. Cannon, 49, Queen-street, E.C.

**HALL AND PARTNERS (Limited).**—Capital 250,000*l.*, in 25 shares of 100*l.* each, and 2250 shares of 100*l.* each. To purchase goodwill, and to carry on in Great Britain and the colonies the construction and equipment of railways, tramways, docks, &c. The subscribers are—W. Hall, Penshore, Sussex; F. W. Cukack, Powis-square, Brighton; W. H. Hall, Claremont-square, N.; A. M. Rose, Queen's-road, Brighton; F. S. Hall, Derby-road, Croydon; J. H. S. Hall, Claremont-square, N.; A. Blair, Ship-street, Brighton, who take one 100*l.* share each.

**CHESHIRE COPPER MINE COMPANY (Limited).**—Capital 20,000*l.*, in shares of 1*l.* Formed to purchase and work copper mines in the county of Cheshire. The subscribers (who take one share each) are—J. M. Oliver, Batavia Buildings, Hackin's Hey, Liverpool; G. H. Sharpe, Hackin's Hey; H. Tarpley, Divining-road, Liverpool; A. V. Spier, Harscote, North Wales; A. Love, Egremont, Cheshire; W. C. Wilkinson, Irwell Chambers, Liverpool; W. A. Browne, Chapel Walk, Liverpool.

**MINERAL COLOUR MANUFACTURE COMPANY (Limited).**—Capital 50,000*l.*, in shares of 1*l.* Formed to carry on the manufacture of all kinds of colours. The subscribers are—W. Douglass, Sterte House, Poole; C. R. Boult, Dale-street, Liverpool; J. Stanley, Martin's-lane; Sir J. Humphreys, Stratford-place, W.; A. J. Boult, High Holborn; Edward O'Dwyer, Belsize-square, W.; Charles Cummine, Grafton-street, Dublin.

**R. S. TRAILL AND COMPANY (Limited).**—Capital 25,000*l.*, in 500 shares of 5*l.* To purchase the goodwill and carry on the business of R. S. Traill and Co. The subscribers (who take one share each) are—W. A. Pattison, High-street, Borough; J. Manland, York-street, Walworth; R. B. Wilton, Walworth-road; H. S. Uphir, Walworth-road; R. S. Traill, Walworth-road; C. Munell, Tanner-street, Bermondsey; W. Painter, Walworth-road.

**EAST WHEAL ROSE, OLD SHEPHERDS, and TRESAVEAN MINES.** Holders of Shares should read Reports, published in pamphlet form, price 2*s.* 6*d.* by CHARLES BAWDEN M.E.' St. Day, Scorrer, Cornwall.

Mining Correspondence.

BRITISH MINES.

**ANDERTON.**—W. J. Bowhay, Jan. 24: We have had a grand, and I believe permanent discovery in the 20. We are driving west in the 20 to get under the fine lode in the winze west of the cross-course in the adit, and have got, I think, within about 8 fms. of the cross-course, where we laid open a splendid up and down lode of rich tin in our end. It is of the same healthy congenital character as the lode in the west, and yielding on assay 1 cwt. 2 qrs. 19 lbs., and variously to 3 cwt. to 1 ton of stuff, and has greatly improved day by day going west. We are carrying 5 ft. of this lode in the end, and in order to prove its width to the south we have cut into it 2 ft. without reaching the south wall. This is not a mere patch or leader of tin on the south of our drivage. It is a well-defined up and down rich lode, which will yield immediate large returns of tin, and so far as I can judge is whole throughout the mine, as I can find no evidence of it having ever been seen before. We were not working for this, and it is a distinct and valuable addition to the points we have had in view. I am delighted with it. All the other points in the mine and the work on surface are going on well.

**BEDFORD UNITED.**—Henry Trezise, Jan. 22: I beg to hand you my setting report for the eight weeks ending March 15.—North Lode: Cross-cut to drive by two men, at 6*s.* 10*d.*; lode worth 8*l.* per fathom. Four tribute pitches set on the north lode, at an average tribute of 12*s.* in 1*l.*—Bridge Lode: The 62 fm. level west to drive by six men, at 3*s.* per fathom; lode worth 10*l.* per fathom. Stopes behind the end, by two men, at 1*s.* per fathom; lode worth 6*l.* The 62 east to drive by six men, at 6*s.* 10*d.*; lode unproductive. Stopes by two men, at 1*s.* 10*d.*; lode worth 6*l.* per fathom. The 42 east to drive by four men, at 7*s.* 10*d.*; lode producing saving work for ore and mundic. No. 1 stopes in the back by four men, at 1*s.* 15*d.*; lode worth 8*l.* per fathom. No. 2 stopes in the back, by two men, at 2*s.* 15*d.*; lode worth 8*l.* per fathom. I have resumed the driving of the 30 west, believing there are shallow bunches of ore in that direction. The end is set to drive by two men, at 3*s.* per fathom; lode 2*s.* 10*d.* wide, and promising. I have set eight pitches on this lode at an average of 11*s.* in 1*l.* The work of the mine is progressing satisfactorily.

**BLUE HILLS.**—S. Bennetts, R. Harris, Jan. 23: The various pitches throughout the mine continue much the same as for some weeks past. The 70 east end worth 8*l.* per fathom and the west end 7*l.* per fathom.

**BWLCH UNITED.**—W. Northey, Jan. 23: The lode in the 100, west of Ritchie's engine-shaft, is about 2*s.* 10*d.* in width, carrying strong patches of lead or tin, and producing a little tin, with occasional stones of grey and native copper ore. The 62 fm. level west to drive by six men, at 3*s.* per fathom; lode worth 10*l.* per fathom. Stopes behind the end, by two men, at 1*s.* per fathom; lode worth 6*l.* The 62 east to drive by six men, at 6*s.* 10*d.*; lode unproductive. Stopes by two men, at 1*s.* 10*d.*; lode worth 6*l.* per fathom. The 42 east to drive by four men, at 7*s.* 10*d.*; lode producing saving work for ore and mundic.

**CARN CAMBORNE.**—W. O. Vivian, Jan. 24: In the 105 the lode is composed of fluor spar, chlorites, and copper ore, it is 2 ft. wide, and its appearance such as I consider very favourable for being productive of either copper or tin in large quantities.

In the same level west the lode is of a similar character and composition as when reported on last week, but is increasing in size. In the winze under the 95 fm. level, which is a little ahead of the 105 west, the lode is improving with depth, and producing some rich tinstone, together with copper ore. In the 40 fm. level, west on the north lode, we frequent changes in appearance and composition; to-day it looks much better than it did a week ago.

**CATHEDRAL CONSOLS.**—S. Davey, S. Davey, jun., Jan. 24: The lode in the engine-shaft sinking below the 74 fm. level, is 3 ft. wide, and producing a black and grey copper ore. The lode in the 74 fm. level east is 3 ft. wide, composed of gossan, and producing a little tin, with occasional stones of grey copper ore. The lode in the rise is 3 ft. wide, composed of quartz and gossan, and producing stones of copper. The lode in the 50, driving east, is 3 ft. wide, composed of prian and decomposed quartz, producing a small percentage of tin; we have broken from this end some good stones of copper, and we consider the indications are good for an early improvement, the ground being easy for development. We have communicated the winze in the bottom of the 50 to the 60, which has given good ventilation, and will facilitate the driving.

**CWM DWYFOR AND BRYNARIAN.**—John Davies, Jan. 22: Brynarian Mine: We have cut very good lead in the level driving east from boundary cross-cut this morning; there is a good sight in the end now.

Jan. 24: We have not done much in the way of driving since I wrote you on Tuesday last, as we have been drawing the stuff; we shall now for a few days drive by the side of the lode. I hope to be able to send you a good report next week.

**DERESBY MOUNTAIN.**—J. Roberts, W. Sandoe, Jan. 23: The lode in the shaft from surface is not quite so good for blende as it has been, but we do not think that this is of much importance, as there is a good lode for blende in the shaft at No. 4 showing that the little falling-off is only temporary. There are tremendous floods of rain, which will necessarily retard our progress here for a day or two. The No. 4 will produce from 1 to 1*1/2* tons to the fathom. The lead seems to be going more south than in any other direction, which if it be so, is rather important, as it goes all into virgin ground. The rise is showing a little more lead, and the ground is a little easier than it has been.

**DEVON FRIENDSHIP.**—F. R. W. Daw, W. Gill, Jan. 24: The calciner and the rest of the machinery on the mine is working well. We are sending off 50 tons of arsenic to-day, and shall commence barrelling again as soon as the carts are returned. A full report shall be sent you next week.

**DEVON GREAT CONSOLS.**—Isaac Richards, Jan. 24: Wheal Josiah: During the past month the count-house shaft has been sunk 1 fm. 5 ft., making the total depth 9 fms. 5 ft. below the 144. The lode having taken a more perpendicular course, the shaft is being sunk on the south side of the lode, the ground proving of a congenital character for the production and favourable for exploration.—Wheal Emma: Inclined Shaft: In Gaintfield's rise, in the back of the 137 east, the lode has been opened on 3 fms. 2 ft. 6 in., proving 5 ft. wide, and worth 2 tons of copper ore and 2 tons of mundic per fathom. —New Shaft, New South Lode: The 205 east has been driven 3 fms. 0 ft. 4 in.; the lode, 4 ft. wide carried being of a most promising character, and yielding a little copper ore of good quality and 4 tons of mundic per fathom. Knott's winze in the bottom of the 190 east has been sunk 1 fm. 3 ft. 9 in.; the lode, 4 ft. wide carried, being composed of capel and quartz, with peach and a little copper ore, and 2 tons of mundic per fathom.—Railway Shaft: At the 205 ground for cistern-pit has been cut; the necessary work in connection with fixing permanent drawing-lift at this level has been done, and the shaft is again in regular course of sinking. The depth of 3 fms. 3 ft. is now reached below this level, and we hope to continue the sinking at this most important point of operation without any further hindrance. The 205 west, on the south part of the lode has been driven 2 fms. 0 ft. 4 in.; the lode, part carried 2 ft. wide, being composed of capel and quartz, with small quantities of copper and mundic ores. The 193 west on the south part of the lode, has been driven 5 fms. 5 ft. in, the lode proving 3 ft. wide, composed of capel and quartz with some good quality unperforated mundic ore.

Watson's: The engine-shaft has been sunk 1 fm., making the total depth 11 fms. 0 ft. 6 in. below the 100, the lode proving 4 ft. wide, of an exceedingly promising character, and yielding 3 tons of copper and mundic ore per fm. The 100 west of the engine-shaft has been driven 1 fm. 5 ft. 6 in., the lode proving 2 ft. wide, composed of capel and quartz, with peach, fluor, and small quantities of copper and mundic ores. Arscott's rise in the back of the 20, east of the western shaft, has been risen 2 fms. 0 ft. 6 in., and communicated with the mid-way shaft sunk in the bottom of the adit, which shaft has been sunk 3 ft., the lode proving at the point of communication, and for the greater part of the distance opened on 4 ft. wide—worth 1 ton of copper ore and from 2 to 4 tons of mundic per fm. The 32 east of the western shaft has been driven 1 fm. 2 ft., the lode proving 2 ft. wide, composed of capel and quartz, with small quantities of copper and mundic ores. The 32 west of the western shaft has been driven 1 fm., the lode proving 1 ft. wide, composed principally of capel and quartz.—Fremont: The deep adit level has been driven west of the cross-cut on No. 1 fms. 2 ft. 2 ft. 6 in., the lode proving from 1 ft. to 1*1/2* ft. wide, composed of capel, quartz, peach, and a little copper and mundic ores. The drivage is at present in a cross-cut which has recently been intersected.

**DEVON GREAT UNITED.**—Isaac Richards, Jan. 24: In the 120, east of Willesford's shaft, the lode is 3*s.* 10*d.* wide, composed of strong capel and quartz, with peach, mundic, and a little good quality copper ore.

**DRAKEWALLS.**—Moses Bawden, Jan. 24: We have completed the side level and laid launders between the engine-shaft and Mathew's shaft, and shall to-day again discharge the water through the deep adit. We have during the past week had a considerable settling down of the stuff in the great Gunnis, but no damage has been done to our workings, and we are glad to see this settlement, as our miners will now work with a much greater feeling of security. The men who have been driving the side level we have now put to drive the 49 west, on the north branches, and to sink a winze below the deep adit west of engine-shaft, on the south branches, and by which we expect to open up some good sections of stoping ground. The lode in the shallow adit, west of engine-shaft, is still producing fair stamping work, but we have opened up a large piece of ground, and shall put more men to stopes as soon as we can get ventilation from the great Gunnis, west of engine-shaft. The north branches in the rise in the back of the 49, directly below the shallow adit, are still holding good and keeping in firm ground; this will be in a few months of great importance to us. There is no alteration in any of the pitches since last report. We shall sell about 10 tons of black tin early next week, the produce of the last four weeks from above the deep adit.

**EAST BLUE HILLS.**—S. Bennetts, W. K. Mitchell, Jan. 23: There is no change in importance in the value of either of the stopes during the past week, consequently the prices remain at 8*l.*, 8*l.*, 7*l.*, and 8*l.* per fathom respectively.

In reference to a search for the Wheal Kitte lode, the better way will be at first to ascertain how far the Gumpas adit cross-cut is extended towards that lode, and this can only be done by means of air-pipes for ventilation, which will be needed at once.

**EAST WHEAL LOVELL.**—R. Quantrell and Son, Jan. 23: The south lode, on which we are sinking, is now 3 ft. wide, and producing good quality tinstuff. A very favourable change is taking place in the lode and ground, and as far as we have opened on it this is the most promising lode we have yet had in this part of the mine. The 17 driving west, on the north lode, contains a little tin. There is no change at Sevorgan since last report.

**NORTH GREEN HURTH.**—J. Polglase, Jan. 17: From appearances we are getting near a vein in the deep level cross-cut. The south end from the deep adit is without any particular change; vein about 1*1/2* ft. wide. We have an important piece of ground before us here. The numerous veins in the adjoining sets we expect are before us, which may be intersected at any time. The level of the Hospital property is chiefly in clay, and rather troublesome at times.</

**PENHALLS.**—S. Bennetts, J. Goyne, Jan. 23: The lode in the 70 east end is without much alteration since last reported on, and is worth 6d. per fathom. The Polberro lode, in the 60 west end, continues large, somewhat better defined, and producing occasional good stones of copper ore and some low quality tinstuff. In the east end it is somewhat similar in composition, but not quite so wide as in the west end.

**POLREBO TIN.**—W. H. Martin, Jan. 23: Monthly Report: Engine-Shaft: The 30 east is communicated with the 30 west from Highburrrow, and the men are now securing the level with timber; next week I purpose to cross-cut south, as the lode is heaved south by the influence of the cross-course; at first I thought the lode was heaved north, but since seeing a part of the lode gone south, west of Highburrrow, I am now of the opinion that it is south. My object for pushing on the drivages in both ends in the soft granite was to communicate as soon as possible, so as to discharge the water from Highburrrow shaft and the 30, east of Highburrrow, through this level direct to the engine-shaft; by so doing we can take the lift of pumps that is now working from the 17 to the 30, and drop them to work from the 30 to the 40, and thus save the expense of buying another lift of pumps. Highburrrow shaft is sunk about 9 fms. under the 30 level; in the last month's sinking the lode has much improved in size and character; it is now the full width of the shaft, and produces good stones of tin, and in the peach and prian good vases of tin are made. I am strongly led to believe that the 40 will be more productive than the 30; sinking by nine men at 11d. per fathom. The 30 east end is driven about 28 fms. from the shaft; in my last monthly report I mentioned that we were near a change for the better; I am proud to say we have a change for the better, and a most important one, and are entering a tin-producing lode; at first we struck the tin in the lode on its regular course, and in driving only a few feet we cut a large stream of water in the bottom of the end, and intersected a large porous lode, gradually rising as we extend, and producing some very rich tin; in fact, the end is not sufficiently driven to know what we have. We have no north wall, nor can I give any idea of the extent of the lode. The water is flowing freely in all directions; I am rather inclined to think that one of the north lodes has dropped in near by. In about 25 fms. beyond the present end we shall reach the junction of Great Wheal Worthy lode; this end is the most promising feature yet seen in this mine. On Thursday last I put two more men to increase the speed, now driving by six men at 9d. per fathom. I may here remark that my object has been to push on the sinking and driving with as little cost as possible, so as to open up new ground. In the next few weeks we have several points of interest to be seen, and to be done with the same staff:—1. To start a trial winze east of engine-shaft and west of the cross-course.—2. To cross-cut south-east of the cross-course.—3. To drive an intermediate level in the winze from the 17 to the 30, where we had rich tin.—4. To sink a winze about 15 fms. west of Highburrrow, under the 30 in the tin ground.—5. To drive the 40 east and west. I need not further remark about the 30 east. The men that were driving the two ends, which are now communicated, I purpose to place in different pairs to prove the above points. In back of the 17 north level we have two tribute pitches worked by six men, at 13s. 4d. in 12. On Tuesday last we sold a parcel of tinstuff for 30s. 12s. 10d.

—J. Prisk, Jan. 23: Special Report: The 30, east of engine-shaft, is communicated with the 30, driving west from Highburrrow, and in driving east from the engine-shaft two distinct courses of profitable ore ground have been opened up—one east and one west of the cross-course. This will in a short time be available for working, when increased returns will be made. A winze has been sunk from the 17, and communicated with the 30. For the first 4 fms. below the 17 the lode was unproductive, after which it commenced to improve, and 12 fms. of the said vein has been through profitable tin ground, which will also shortly be available for stoning. Highburrrow shaft is nearly down to the 40, and I am pleased to say, the lode has very much improved in the last fathom or two, and my opinion is you are now getting into a permanent and profitable lode there. The lode in the 30 end, east of Highburrrow shaft, has recently improved, and is producing rich tinstuff, and from its general appearance I think you have every reason to expect a very rich course of tin in this level. It is not sufficiently cut into to enable me to value it, but I am safe in saying it has the appearance of a valuable discovery, and I am rather inclined to think it is the junction of one of the north lodes, and if such is the case I think you may rely on having a profitable mine almost at once. I am exceedingly well pleased with the prospects, and when I make my next inspection I shall give you the values of the several points in operation.

—W. Battye, Jan. 23: Since the report of this mine was sent you yesterday, another valuable discovery has been made in the 30, which is described by the agent as "a grand-looking lode." In the 30, east of Highburrrow shaft, there is also a further improvement, information of which has come to hand this morning.

**POLROSE.**—W. Bennetts, Jan. 23: The men are making good speed in driving the 122 east; the lode is fully 3 ft. wide, composed of peach, spar, and a little mundic, with tin disseminated throughout; it is a very compact lode with two regular walls, and looks promising for an early improvement. This lode is going back west to the south of the shaft, and we have opened it on to within 5 ft. of the shaft, but finding the ground weak I have put the men to cross-cut south from the 122 west on the north part of the lode so as not to interfere with the shaft. The cross-cut will be about 2½ or 3 fms., which we ought to drive in a fortnight. This will cut the lode further west than it has yet been seen.

**PRINCE OF WALES.**—S. Roberts, Jan. 23: Setting Report: The 102 east is set to six men, at 9d. per fm.; lode 2½ ft. wide, producing very good tinstuff. We have not yet been able to sample it to ascertain its value. The stopes in the back of this level, to two men, at 6s. 6d. per ton; lode 3 ft. wide, worth 5s. per fathom for tin. The 102 west, to six men, at 12s. per fathom; the lode is 9 ft. wide, composed principally of dark capel and spar, impregnated throughout with copper ore to the value of 2 tons per fathom, and 8s. per fathom for tin. The stopes in back of this level, east of rise, to six men, at 5s. per fathom; the lode is 6 ft. wide, worth 7s. for tin. No. 1 stope, west of the rise, to six men, at 3s. 10s. per fathom; the lode is 3 ft. wide, worth 2 tons of copper ore and 3s. for tin. No. 2 stope, west of the rise, to four men, at 3s. 10s. per fathom; the lode is 3 ft. wide, worth 4s. for tin. The 90 west, to four men, at 11s. per fathom; the lode is 5 ft. wide, a very kindly lode, producing copper ore throughout, and worth 1½ ton per fathom and 5s. for tin. The winze in the bottom of this level, to four men, at 6s. per fathom; the lode, which we anticipate being large and productive, is not yet taken down. The 90 east, to two men, at 2s. 10s. per fm. and 13s. 4d. in 12, tribute; lode 4 ft. wide, of a very promising character, and producing rich tin and copper ore. The stopes in the back of this level, west of No. 1 rise, to three men, at 6s. per ton for tinstuff and 10s. in 12, for copper ore; lode 3 ft. wide, worth 4s. for tin. The stopes in the back of this level, east of No. 2 rise, to four men, at 6s. per fathom; the lode is 4 ft. wide, worth 6s. 10s. per fm. The 55 west, to two men, at 8s. per fathom; lode 3 ft. wide, composed of capel and spar, and producing saving work for tin. We set four tribute pitches, to eight men, at 13s. 4d. tribute. The new stamps were started to work on Monday evening, and work well.

**ROMAN GRAVELS.**—Arthur Waters and Son, Jan. 24: The 125, south of new engine-shaft, is in a lode 7 ft. wide, nice white spar, and good stones of lead ore, a very promising great lode. The 125 north is worth 2 tons per fathom; the 110 south is worth 2½ to 3 tons per fathom. The 95 south is at present in a narrow lode, the yield being about 2 tons per fathom. The 80 south is worth 3 tons per fathom, the last two named ends may be expected to improve considerably in the next 4 fms. driving. The 80, north of old shaft, is getting into a good-looking vein, worth to day 15 cwt. lead ore per fathom. The stopes are yielding their usual quantities of lead ore.

**RUSSELL UNITED.**—John Bray, Jan. 24: The lode in the bottom of Matthew's shaft is of a highly promising character. It is at present 6 ft. wide, composed of quartz, capel, iron, and mundic, with large stones of yellow copper ore. The ground at Stephens' shaft is thickly spotted with mundic and copper; within the last 6 ft. sinking the ground has become harder, but still highly mineralised throughout. The machinery is working well.

**SINCLAIR LEAD AND BLENDÉ.**—W. T. Harris, Jan. 24: Sampson Shaft: By train-to-day I send you some nice specimens of lead ore taken from the newly discovered lode, the appearance of which is highly encouraging, and in composition equal to anything that could be expected at such a shallow depth. One grand feature in connection with this discovery is the prospect of increasing productiveness in sinking deeper, and at 60 yards, where it is contemplated to drive out upon its course, not only the increasing quantities obtained in the operation, but the intersection of east and west lodes of known celebrity, and running in close proximity to the shaft, will certainly result in yielding large quantities of lead. At Wacco shaft, the 60 cross-cut south, have to day found lead in the joint, and in a few days expect to be into the lode and discover a good body of lead. No change elsewhere.

**SOUTH CONDURROW.**—W. Rich, W. Williams, H. King, Jan. 23: The ground in the 80 end, east of King's, is easier for driving and the lode opening out wider; end now worth 8s. per fathom. The stopes in the back of the level is worth 12s. per fathom. The 80 west of Plantation shaft is unproductive at present. We have begun to drive a cross-cut north from this shaft at the 80, with the view to intersect the copper lode. The winze sinking below the 70, west of Plantation, is worth 6s. per fathom. The 70 end, east of King's, is worth 8s. per fathom. Two stopes in the back of the level are worth 12s. and 15s. per fathom respectively. The 60 end east is worth 7s. per fathom. The stopes in the back of this level is worth 10s. per fathom. The 50 end east is worth 16s. per fathom, and the stopes in the back is worth 12s. per fathom. The 40 end east is yielding saving work for tin. The lode looks likely to improve and is letting out water freely. The lode in the 30 west is increasing in size, but up to this time it is unproductive for tin. The 20 end east is worth 10s. per fathom, and the stopes in the back is worth 15s. per fathom. The 42 end, west of Marsall's shaft, is worth 6s. per fathom. We have intersected the south part of the lode in the 50 cross-cut, which is yielding good stones of tin. We have commenced to open on it west. The levels below in this part of the mine are without material alteration since our report of last week.

**SOUTH DARREN.**—John Mitchell, Jan. 24: The following bargains were set on Saturday last for one month:—To drive the 130 end east, by six men, at 19s. 10s. per fathom. To drive the 130 end west, by six men, at 9s. 10s. per fathom. To stope in the 130 west, by six men, at 3s. 15s. per fathom. No. 1 stope in the 120 west, by four men, at 4s. per fathom. No. 2, by four men, at 4s. 10s. per fathom for stopping and stripping. No. 3 stope in the 120 west, by six men, at 3s. 10s. per fathom. No. 1 stope in the 120 east, by four men, at 3s. 15s. per fathom. No. 2, by six men, at 3s. 15s. per fathom. No. 3, by six men, at 3s. 12s. 6s. per fathom. To stope in the 110 west, by four men, at 3s. 15s. per fathom. The tribute pitch in the upper levels, by eight men, at 7s. per ton for silver-lead ore and 3s. per ton for copper ore, tributes to pay 20s. per ton for dressing. The lode, by two men, at 7s. 9d. per 100 cwt. Lading the ships, by two men, at 5s. 6d. per 100 ships. Drawing the stuff, by two men, at 7s. 10d. per month. Cleaning the ore-stuff for the crusher, at 11s. per month. The lode in the 130 east is strong and looks promising, and is at present worth 1½ ton silver-lead ore per fm. This end is now under the good course of ore that we have in the level above, and which extends before us for about 20 fms. In the same level west the lode is worth 1½ ton of silver-lead ore per fathom. We have now opened out 10 fms. of very good stoning ground here. The stopes east of lode in this level is worth 2½ tons of silver-lead and 10 cwt. copper ore per fathom. No. 1 stope in the 120 east is worth 1½ ton of silver-lead ore per fathom, and 1 ton of copper ore per fathom. The No. 2 stope is worth 1½ ton silver-lead. No. 3 stope has got poor in the eastern end, and as there is no lead over this part in the 110, we have suspended this end of the stope; the western part is still worth 2 tons silver-lead ore per fathom. No. 1 stope in the 120 west is worth 1 ton of silver-lead and 10 cwt. of copper ore per fathom. No. 2 stope is worth 1½ ton, and the stripping in the side of the level here is worth 1 ton of silver-lead ore per fathom. No. 3 stope is worth 1 ton of silver-lead ore per fathom. A stope in the 110 east is worth 1½ ton of copper and 10 cwt. of silver-lead ore per fathom. A stope in the 110 west

is worth 1½ ton of silver-lead ore per fathom. The tribute pitches are producing fair ore stuff. Drawing and dressing are going on regularly.

**SOUTH DEVON UNITED.**—W. Hooper, Jan. 24: The lode in Martin's shaft continues fully its size—from 5 ft. to 6 ft. wide—but contains a little more spar as the lode has been subject to like changes; the prospects in this direction are most cheering. The 110 fm. level, east of Brook engine-shaft, is without change, the killing being of a very kindly, fine description for the production of copper ore; at present the lode is small, and not to value. The stopes in the back of this level, east and west of Brook shaft, are worth 5s. and 6s. per fathom. The stopes in the back of the 90 fm. level, east of Brook engine-shaft, are worth —No. 1, 7s., and No. 2, 5s., per fathom. We are not yet through the lode at the 70 fm. level, west of Old Sump shaft; as far as seen it is composed of capel, spar, and stones of both mundic and copper ore. The lode in the adit level, west of old sump shaft, continues to present its very promising appearance, being 5 ft. wide, producing beautiful gossan, fluor spar, with occasional stones of copper ore.

**SOUTH TOLCARNE.**—Thos. Angove, Samuel Arthur, Richard Wren, Jan. 23: Frasers Lode: The lode in the 80 end, west of engine-shaft, is not so large as last reported; now about 3 ft. wide, and worth 6s. per fathom. The tin stopes in the back of the 70, 60, and 50, working by 22 men, are of a very uniform value, producing 28 lbs. of tin to the ton. The 50 cross-cut north has been driven through some tin branches, which we may at some future period work, but the great flat lode is still to the north of us.—Taylor's Lode: The sump winze sinking below the 12, by nine men, is down 6 fms.; worth 30s. per fathom. The lode in end to the west of this winze has fallen off in value, and is for the present suspended. The 24 cross-cut, driving south is letting out more water, and we expect to cut the lode at this level soon.—Gossan Shaft: The sinking of Gossan shaft below the 36 is suspended for the present. We are fixing an air-machine here to ventilate our stoning ground in the back of this level. We shall resume driving the cross-cut south at this level to intersect the flat lode to the west of the cross-course. In the 35 end, driving west of Gossan shaft, the lode is 2 ft. to 3 ft., producing saving work for tin. Three stopes in the back of this level are arranged to, which will leave a profit on stoning. We have only just commenced to work this ground, and as it is standing whole to surface about 70 fms., we cannot report accurately its value. We have three tin stopes in the back of the adit and one at North Tolcarne, all producing tinstone, which will leave a profit on the working.

**TANKERVILLE GREAT CONSOLS.**—Arthur Waters and Son, Jan. 24: Bog Mine: The water is now 5 fms. below the 175 fm. level; engine doing good duty.

The 165, east of engine-shaft, is opening tribute ground, and looks likely to improve as we go forward. The 19 pitch by 57 men are worth together 4½ tons of lead ore, and about 13 tons of blend, per fathom. The parcel of lead ore sold from this mine to-day will be into trucks at Snailbeach by to-morrow evening, blends to follow.—Pennerley Mine, Warm Water Lode: The lode in winze and slope below the 120 west is worth 30 cwt. of lead ore per fathom. Stopes in back of the 120 west is worth 20 cwt. per fathom. We expect this latter stope to improve as the men advance towards the shaft. The new shaft below the 93 is at present in a cavity; lode worth 30 to 40 cwt. of lead ore per fathom. The lode along the bottom of 93 west varies in value from 2½ to 4 tons of lead ore per fathom; we are preparing to sink a winze in the said run of ore. The two stopes in back 93 west are worth 5 tons per fathom. The 93 east shows indications of a wider and more productive lode than seen of late. The winze below the 88 east of shaft is worth 30 cwt. per fathom. The stopes in back of this level east is worth 35 cwt. lead ore per fathom. Nothing new at Potter's; the water is going down slowly.

**TANKERVILLE MINE—MAIN LODGE.**—The 244 has laid open the hanging-wall portion of the vein for 3½ fms. in length, the width carried being 5 to 6 ft. The foot or south wall, will be cut into in the course of the next two or three days. The 244 end, east of Watson's shaft, is worth about 2 tons per fm.; going west the end is worth 30 cwt. per fm. The winze below the 222, in the cavity, is worth 3 tons per fm. There is a considerable flow of water from the lode here, more than was ever seen before out of a cavity in Tankerville; and, looking at the width of the lode, the beautifully white and highly crystallised matrix, together with blocks and large cubes of nearly solid galena, we are in great hopes of finding a profitable and permanent run of ore ground when this part of the mine is a little further developed. In the 222, going east of winze, east of Watson's, we have to-day cut through the lode to the hanging or north wall, and have discovered nice bright, soft lead ore, worth 2 tons per fathom. Very fine specimens of the spar and crest stuff were sent to surface from the last hole blasted at noon to-day. We may expect this discovery will lead to a continuance of productive ground all the way to the shale. The stopes in bottom of the 220 east are worth about 3½ tons per fm. Other points just as when last fully reported on. We shall sample two parcels of lead ore and one of blend here to-morrow, and will send notices by next post.

Jan. 25: Telegram: Sampled 30 tons No. 1, 12 tons No. 2 lead, and 40 tons blende.

**TREGEMBO.**—E. Chegwin, Jan. 23: The 30 driving east and west of cross-cut, the lode in the east end is 4½ ft. wide; the south part of this lode in the footwall is 12 in. wide, producing rich stones of tin and copper. The lode in the west end of the same level is about 4½ ft. wide; a bold and promising lode, also producing good stones of tin and copper. I have placed six men to sink Derrick's shaft below the 16 on the course of the lode, which is about 15 fms. in advance of the 30 east end. At the 12, driving east from Pinnock's shaft, the lode is 4½ ft. wide, worth for tin 12s. per fathom. In the 18, east of cross-cut, the lode is 2 ft. wide, worth for tin 6s. per fathom. In the 18, west of cross-cut, the lode is 1½ ft. wide, producing good stamping work for tin. In the adit end, the lode is 1½ ft. wide, producing good stamping work for tin. The 244 end, east of shaft, is 3 ft. wide, worth for tin 8s. per fathom.

**WEST CREBRO.**—John Andrews, Jan. 23: The bottom level is now cleared of stuff for 25 fms. east of shaft, and for that length the lode is from 3 ft. to 6 ft. wide, a strong masterly-looking lode, composed principally of quartz, capel, mundic, and copper ore, but not sufficient of the latter to value. The bottom level west will be cleared out and secured with timber to-morrow, when we shall take the men from the 70 west to drive this level, and as it is 4½ fms. below the 70 we shall in future call this the 80 west.

**WEST GODOLPHIN.**—F. Hodge, Jan. 22: The engine-shaft below the 80, to 12 men, at 35s. per fathom; the lode is opening out wider, with more quartz, producing saving work. The 80 west, on Pink lode, to four men, at 8s. 11s. per fm.; the lode in the end is small, but produces some good stones of tin. Directly it opens out again we expect an improvement. The stopes in the back of the 20 east, on Pink lode, is slightly improved, worth 15s. per fathom; set to six men, at 7s. per fathom. The stopes in back of the 80, west on Pink lode, to six men, at 8s. per fm., worth 10s. per fm. The 50 end west, on Pink lode, to two men, at 6s. 15s. per fm.; lode 4 ft. wide, worth for tin 12s. per fm. A rise in the back of the 50 west, on Pink lode, to two men, at 7s. per fm., to be carried 9 ft. long; lode worth for this length 9s. per fm. The 40 east, on Pink lode, to two men, at 7s. per fm., producing stamping work. Three tribute pitches, to seven men, at 8s. 11s. and 13s. 4d. in 12, to be paid at the rate of 40s. per ton for black tin. The engines and machinery are kept in good working order.

**WEST GODOLPHIN.**—F. Hodge, Jan. 22: The engine-shaft below the 80, to 12 men, at 35s. per fathom; the lode is opening out wider, with more quartz, producing saving work. The 80 west, on Pink lode, to four men, at 8s. 11s. per fm.; the lode in the end is small, but produces some good stones of tin. Directly it opens out again we expect an improvement. The stopes in the back of the 20 east, on Pink lode, is slightly improved, worth 15s. per fathom; set to six men, at 7s. per fathom. The stopes in back of the 80, west on Pink lode, to six men, at 8s. per fm., worth 10s. per fm. The 50 end west, on Pink lode, to two men, at 6s. 15s. per fm.; lode 4 ft. wide, worth for tin 12s. per fm. The 40 east, on Pink lode, to two men, at 7s. per fm., producing stamping work. Three tribute pitches, to seven men, at 8s. 11s. and 13s. 4d. in 12, to be paid at the rate of 40s. per ton for black tin. The engines and machinery are kept in good working order.

**WEST GONAMENA.**—N. Richards, Jan. 23: There is no particular change to notice

## TO THE METAL TRADE.

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## The Mining Market: Prices of Metals, Ores, &amp;c.

METAL MARKET—LONDON, JAN. 25, 1884.

IRON.	£ s. d.	£ s. d.	TIN.	£ s. d.	£ s. d.
Pig, gms, f.o.b., Clyde...	2 3 8	—	English, ingot, f.o.b...	88 0 0	87 0 0
" Scotch, all No. 1 ...	2 5 0	—	" bars	87 0 0	88 0 0
Bars, Welsh, f.o.b., Wales	5 5 0	5 7 6	" refined	88 0 0	88 0 0
" in London	5 15 0	5 17 6	Australian	82 0 0	—
" Stafford	7 0 0	7 5 0	Bans	nom.	—
" Tyne or Tees	5 10 0	—	Strata	82 0 0	—
" Swedish, London...	9 0 0	9 10 0	COPPER.	—	—
Rails, Welsh, at works...	5 5 0	5 7 6	Tough cake and ingot	81 0 0	82 10
Sheets, Staff., in London	8 0 0	8 10 0	Best selected	63 0 0	64 0 0
Plates, ship, in London	8 5 0	8 10 0	Sheets and sheathing	69 0 0	71 0 0
Hoops, Staff.,	7 0 0	7 10 0	Flat Bottoms	72 0 0	74 0 0
Nail rods, Staff., in Lon.	7 0 0	7 5 0	Wallaroo	nom.	—
STEEL.	—	—	Burra, or P.C.C.	nom.	—
English spring	12 0 0	12 0 0	Other brands	63 10 0	64 0 0
cast	30 0 0	30 0 0	Chilli bars, g.o.b.	55 17 6	—
Swedish, keg	13 0 0	14 0 0	QUICKSILVER.	—	—
fag, ham.	13 0 0	14 0 0	Flaiks, 75 lbs., war...	5 5 0	—
Balls at works...	4 2 6	4 5 0	Phosphor Bronze	—	—
" Light, at works...	5 17 6	6 0 0	Alloys I. and II.	£114 0 0	—
LEAD.	—	—	V.	120 0	—
English, pig, common...	12 2 6	12 7 6	" VI. and VII.	135 0 0	—
" L.B.	7 6 0	12 6	" XI. Duro A, Duro B.	112 0 0	—
" W.B.	12 6 0	12 17 6	BRASS.	—	—
" sheet and bar...	13 0 0	—	Wire	53d. 63d.	—
" pipe	13 10 0	—	Tubes	5d.	—
" red	15 0 0	15 10 0	Sheets	7	—
" white	16 10 0	19 0 0	Yel. met. sheath. & sheets	54d.	—
" patent shot	15 0 0	—	per box	—	—
Spanish	11 17 6	12 0 0	Charcoal, 1st quality	1 1 0	1 2 0
Metal per cwt.	—	—	2nd quality	0 19 6	1 0 0
Ore 10 percent. per ton.	—	—	Coke, 1st quality	0 17 6	0 12 0
Spikes...	—	—	2nd quality	0 16 6	0 17 6
Gিলসন, ordinary brands	14 5 0	15 0 0	Black, 1st quality	per ton	15 10 0
" special brands.	15 5 0	15 7 6	Canada, Staff. or Glas.	12 0 0	—
English Swansons	15 15 0	—	at Liverpool	—	—
Sheet zinc	18 10 0	—	Black Tiggers, 450 of	30 0 0	—
At the works, £s. to £s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than 10 quoted above, and add 6s. for each X. Terne plates 2s. per box below tin-plates of similar brands.	14 x 10	—	14 x 10	—	—

**REMARKS.**—Our markets have remained in a very dull and depressed condition, the feeling being particularly inanimate at the early part of the week, when in order to do business lower prices had to be accepted. Not that any fresh feature has arisen to intensify the depression; but the tone is considerably dulled by the great uncertainty that there is existing as regards the future. Uncertainty causes much indecision on the part of all operators, it produces hesitation and sorely tries the patience of almost every holder. It creates disorganisation in the markets, it produces manifest uneasiness, and it shatters confidence in very great measure. It intimidates weak holders into pressing sales, and it makes even the strong to feel much anxiety. It strips the markets of all speculative buying, and in no small degree it tends to unsettle the regular trade. It induces more importance to be attached to the unhealthy influences than is really requisite, and it causes favourable features to be put in the background. It leaves little or no check to production because suppliers are invariably hopeful of better times; but it deters consumers and shippers buying as freely as they might do, as they prefer to run the chance of being able to purchase upon more favourable terms by holding their orders in abeyance as long as possible. Thus from this cause the markets often display many symptoms of feebleness, the prospects are blackened, and many operators appear quite at a loss to decide whether to hold on any longer and hope for better times, or to cut their losses at once and quit the market altogether until the gloomy commercial atmosphere has passed away, and is followed by brightness and cheerfulness. Occasional glimpses of brightness burst through the existing gloom, and with it the feeling rallies, confidence becomes less shaken, and extra animation prevails; but this is of short duration, it is appreciably felt while it lasts, but it soon passes away and gives still keenest experience of the gloom that afterwards follows. Uncertainty is by no means the only evil that exists in the markets just now, there are many others of a more or less weighty character; in fact from them it has its origin. Nevertheless, its influence is very important, and, perhaps, more important than any other at the present time, because in the absence of any certainty and in the want of any marked probability of the markets turning in either one direction or the other, operators take an adverse view of things, and the markets in consequence suffer. So far, then, we have viewed the existing feeling of uncertainty in its unfavourable light and unquestionably that is the principal way in which it must be viewed; but, at the same time, it has its brighter aspect, and whilst dealing with it both sides of the question ought to be considered. Whilst there is uncertainty there is room for hopefulness that the future may prove better than many picture it, and, further, the reduced prices which are caused by the unacquaintance as to what may be forthcoming must, as we have often brought before the notice of our readers, help to encourage and promote regular trade in all its branches. It is a question of time, and whilst there is literally nothing to show that trade is likely to revive shortly, so there is nothing to indicate its further decline on in the coming months.

**COPPER.**—This market has kept in a very dull and uninteresting condition, prices tending in favour of buyers. Both the raw material and manufactured have been easy, and sales of almost all sorts have been made at reduced rates. The principal point to be said in favour of the market just now is the very low value of this metal, which ought, and probably does, in some measure stimulate the ordinary demand, and at the same time tends to check undue "bear" sales which would necessarily only help to still further weaken the market. This is seemingly the only point upon which holders have ground for believing in a restoration in prices, by hoping that the low rates may check forthcoming supplies. On the other hand, there are many evidences to show that it will require the united efforts of holders to prevent prices from crumbling away. Advice from India is not favourable, and it is evident that many operators have no confidence whatever in the future, and will not make purchases even at the present very low figures, hence surfaces have had to be made. Notwithstanding the reduced rates there have at times been signs of a little extra firmness in the tone, and the appearance of the market has been stronger, but this has arisen from a few holders using every effort in their power to give strength to the market, to check the downward course, and, if possible, to attract the attention of operators, and thus restore prices to a higher level. It is a little doubtful, however, whether operators will be tempted to come forward, trade all round is too bad, profits recently have been very limited, and with any hardening tendency of money it is more than probable that prices will have to be unprecedentedly low before the active attention of a speculative public is brought to bear its important influence upon the copper market.

**IRON.**—Business in this metal still keeps dull, notwithstanding that manufacturers and other sellers do all in their power to stimulate the demand, and put fresh life into business by accepting at times slightly reduced prices; and further, almost always being easy in their quotations. We now speak of iron in general, but manufacturing in particular—Welsh, Staffordshire, North country, all qualities alike being in limited demand, and throughout the whole country reports of semi-stagnancy come to hand. At the Board of Arbitration of the Northern Iron Trade, last Wednesday, there was no alteration in the scale of wages made, and the men may congratulate themselves upon this result, considering that there has been a decline in prices during the last two months of fully 2s. 6d. per ton. At the same time, whilst the trade generally remains slack, yet the recent definite decision on the part of the Cleveland makers to curtail the production still continues to have a very beneficial influence upon the trade in Middlesbrough and Scotland, and the markets there keep firm, now and again showing a spirit of buoyancy, and even at times of activity, which is a most gratifying feature and is very appreciable just now, when the trade for the most part is in such a sluggish condition. It is the bright side of the market, and has given renewed room for hoping that the trade may not have to continuously drag on with present unremunerative prices, but that the time may not be far distant when better rates can be realised. A very fair business has been transacted in makers' iron, and the recent advance which was made in almost all brands has been more decided.

The advance in this sort of iron is even more definite than that in the quotations for warrants. On Monday last the Glasgow warrant market opened at 4s. 7½d.; but business was quiet, and the price receded to 4s. 10½d., and on Tuesday the tone was flat, and transactions were recorded between 4s. 9d. and 4s. 7½d.; but from which point there was a steady improvement to 4s., while on Wednesday the market was quiet and easier at 4s. 11d., to 4s. 9½d. Yesterday the market was quiet, but firm, at 4s. 7d. to 4s. 8½d., and the closing figure this afternoon is 4s. 15d. per ton. The shipments last week were 9229 tons, against 8051 tons for the same week of last year, being an increase of 1178 tons, and which makes the total shipments for the whole of this year 30,935 tons, against 33,622 tons for the same time of last year, and 26,507 tons for the similar period of 1882. There is one extra furnace in blast compared with last week, the total now being 101, while the public stock has been further increased by 336 tons and now amounts to 587,629 tons, against 587,293 tons a week ago. The imports of Middlesbrough pig iron from Grangemouth last week were 8805 tons, against 6758 tons for the corresponding week of last year, being an increase of 2047 tons, and which makes a total increase for the whole of this year, compared with last, of 1409 tons.

The Cleveland market is reported strong, and unfavourable advices from other parts of the country as regards the state of the trade have failed to check business in Middlesbrough. For present delivery No. 3 is quoted at 37s., and No. 4 forge at 35s., to 35s. 6d.; and for forward delivery 38s. is quoted for No. 3, but 37s. 6d. has been accepted. Last week the shipments were 16,711 tons, and the public stock increased by 121 tons, the price of warrants being quoted at 37s. In manufactured there is much weakness, and bars are quoted at 5s. 2d. to 5s. 5d., angles at 5s., ship-plates at 5s. 7s. 6d., and puddled bars at 5s. At Wolverhampton there has been an absence of all vitality, and but few really good orders have been given out. Sheets are quoted at 7s. 10s. to 7s. 15s. for ordinary singles, doubles at 7s., and battens at 5s. Tank-plates can be bought at 7s. 10s., best bars at 7s. 10s., and c. m. monies at 6s. 15s. to 6s. 17s. 6d.; and, as regards pigs, Derbyshire are offering at 4s., Northampton at 4s., to 4s. 5d., and common Staffordshire at 4s. per ton. There is no variation in the market at Birmingham, and but very little business has been transacted in any description of iron, whilst prices all round are steady, although at times manufacturers and others do not appear wholly indisposed to make some trifling and unimportant concessions.

**TIN.**—This market has remained exceedingly depressed, and further reduced rates have again been accepted. The market was excessively dull at the commencement of the week, on Monday and Tuesday the tone being particularly flat, and while prices were quoted down very much lower rates than those officially quoted were accepted both for cash and forward prompts, after which the feeling slightly improved, and the market has since been steadier, but at the same time quiet. This market moves so rapidly and is of such a fluctuating character, that notwithstanding its aspect of inactivity during the past week, that in itself forms no criterion or gives any foreshadowing of the future. There is just as much likelihood of a restoration in prices during the ensuing week as of prices keeping steady or of further receding; in fact, the chances may, perhaps, be more in favour of improvement than otherwise, for we must remember that there has been a serious fall, and consequently a rebound might follow. Further, during the last three months prices have receded some 10s. to 15s. per ton in value, and as there are still many prompts open at the higher figures, it is not improbable that an effort will be made to restore the market. Whether such efforts will prove successful must be left for time to show, but considering that some operators are very strong and influential, it is likely that they will regulate prices in their own interest when they believe the right time has arrived for them to operate in such a manner. It is quite possible that prices are just now being purposely depressed, so that more favourable purchases will be able to be made at the ensuing Dutch sale.

**STEEL.**—The demand is still extremely dull, and prices fairly steady, but on the whole the tendency is in favour of buyers. **TIN-PLATES.**—Prices show but little variation from those realised during the past few weeks, but the demand has slightly improved. **SPELTER.**—There has been but a limited business transacted, and prices for both English and foreign remain as last quoted. **LEAD.**—Buyers continue to be very shy in making purchases, and the low value of this metal fails to stimulate the demand.

**QUICKSILVER.**—The importers' price remains at 5s. 5d. The demand continues fairly good, but has been again supplied by sales from second-hands. The imports for the new season have now commenced, 4000 bottles having arrived this week.

Very little change has taken place in the **MINING SHARE MARKET** this week; business is very dull, and quotations for the most part are merely nominal. Low-priced shares are still most in favour, but there is very little change in prices. Those dealt in have included Wheal Crebor, West Crebor, Bratsberg, Prince of Wales, Carn Brea, Tincroft, Wheal Agar, Dolcoath, and a few others. The discussions taking place in Cornwall on royalties and dead rents on mines are exciting a great deal of attention, and it is hoped and expected that the miners will be met in a liberal spirit by the lords. In most mines there is what is called a "dead" rent, that is an annual charge which merges into royalty when returns are made, and it is contended that this rent should not be paid out of calls, or when mines are working at a loss. There are other things also to be considered—the present high wages paid, and the "thirteenth month" in a year system.

**TIN** shares are flat, and little dealt in; there has been no alteration in the standards for ore since Jan. 7. The quotation of prices are mostly nominal. Blue Hills, 5 to 6d.; Carn Brea, 1s. 10d. to 1s. 12d.; Cook's Kitchen, 8 to 9d.; Dolcoath, 6d. to 6s.; East Lovell, 4 to 4s.; East Blue Hills, 3s. to 4s.; East Pool, 34 to 36; Killifreth, 1s. to 1s. 10d.; New Kitty, 1s. 2s. to 2s.; New Trumpet, 1s. 10d. to 1s. 12s.; South Condurrow, 9s. to 9s. 6d.; West Frances, 5s. to 6s.; West Bassett, 1s. 2s. to 1s. 10d.; West Kitty, 12s. to 13s.; Wheal Agar, 10s. to 11s.; Wheal Bassett, 2 to 2s.; Wheal Kitty (St. Agnes), 1s. to 1s. Wheal Uny, 1s. to 1s.; at the meeting the accounts showed a loss of 2221l. on four months' working, and a balance against the mine of 5550l. A call of 10s. per share was made. The tin sold (69 tons) realised 3239l. The agents hope, if present prospects continue, to sell 70 to 75 tons in four months. At East Uny the accounts showed a loss of 1249l., and a call of 15s. per share was made.

Tincroft, 1s. 10d.; at the meeting the accounts showed a loss of 3245l., and a balance against the company of 9175l. A call of 15s. per share was made. It having been rumoured that relinquishments of shares had taken place both in this mine and in Carn Brea, Capt. Teague informed the meeting that not a single share had been relinquished in either mine, and he hoped if they met with such lodes they would be able to pay dividends instead of making calls at Tincroft, Treaveyan, 1s. to 1s.; West Godolphin, 1s. to 1s.; West Polbreen, 1s. to 1s.; South Kitty, 1s. to 1s.; South Phoenix, 1s. to 1s. Wheal Grenville, 5s. to 5s.; tribute pitches set to 20 men, average tribute 10s. in 17. to be paid; 45s. per ton for black tin.

**COPPER** mines are only moderately dealt in, and quotations are mostly nominal. Bedford United, 1s. 10d. to 1s. 12s.; Devon Great Consols, 3s. to 3s.; Gunnislake (Clitters), 1s. 10d. to 1s. 12s.; Mellanore, 2 to 2s.; a dividend of 6d. per share has been declared payable on Feb. 8. New West Caradon, 1s. to 2s.; at the meeting the accounts showed a balance against the company of 1127. 8

26547. 1s. 11d. Advices have been received from Kimberley that a dividend of 5 per cent. will be paid for the quarter ending Dec. 25.

The letters of allotment of the Spitskop (Lydenburg) Gold Mining Company have been posted. It is understood that the hydraulic machines to work the property have been ordered in California, and are to be delivered in England ready for shipment to the Transvaal during next month, and that specifications for a stamp-mill are being prepared.

The Arizona Trust and Mortgage Company are inviting subscriptions for 150,000/. Seven per cent. Debentures, secured upon the uncapital and other assets, amongst which are \$1,330,000 Six per cent. Mortgage Bonds of the Arizona and New Mexico Railroad Company, and \$1,300,000 of the capital stock of the same line.

Carn Brea are quoted 1½ to 2 (call paid); there have been rumours of large relinquishments of shares both in Carn Brea and Tincroft, but these rumours are absolutely groundless, for Mr. W. Teague states:—"Not a single share in either of the mines has been relinquished."

Cook's Kitchen shares have fallen to about 7s. to 8s. per share, and it is already rumoured that another call will be necessary at the next meeting.

Devon Great Consols, 3½ to 4, and it is said that they are in demand, and scarce for delivery. The agents report that the Railway shaft which is being sunk with the object of finding rich deposits of tin as well as copper ore, is now being pushed down vigorously, the indications being such as to warrant the expectation of making good discoveries of tin, copper, and mudioc ore. Watson's engine-shaft is now down over 11 fms. below the 100, producing 3 tons of copper and mudioc ore per fathom.

Devon Great United, ¾ to ½; in the rise in the 120 the lode has opened out to 3 ft. wide, and is producing 2 tons of rich copper ore and mudioc per fathom, and it is likely to improve, as the 104 west still continues to yield 4 tons of copper ore per fathom. The lode recently cut in the 60 west is 2½ ft. wide, producing good quality of copper ore and mudioc and a little tin ore.

Drakewalls, 5s. to 6s.; the agents report that 10 tons of black tin will be sold early next week.

Ecton, 1½ to 2½; very great progress is being made at the mines; the new engine is bought, paid for, and erected, and work is being carried on in all departments with great activity. Some new discoveries of rich yellow copper ore have been made in the Ecton lode, of which splendid specimens have been received in London this week.

Kit Hill Consols, ½ to ¾; the tunnel level has been driven 13 ft. during the past week. The lode in the engine-shaft sinking below 88 is a fine lode, being 6 ft. wide, yielding tin ore; and the 88 east is 5 ft. wide, producing tin and copper ores.

South Devon United, ¾ to ½; the lode in Martin's shaft for the part being carried maintains its size, and is worth 20/- per fathom.

West Frances shares have given way about 17/- per share, to 7 to 7½. It is said the lode in the rise is looking about the same as for some time past.

West Seton, 7 to 8; the agent reports the lode in Mitchell's engine-shaft is worth 60/- per fathom, and the winze below the 216 is worth 40/- per fathom, and another winze below the 204 is worth 20/- per fathom.

Asia Minor are reported to have improved; it is understood that dispatches have just been received from the Lidgessy mines announcing an important discovery in No. 1 district. By a cross-cut in No. 3 level they have pierced another lode, 4 ft. thick, thus showing the existence of two distinct lodes, instead of one as supposed. This discovery will be the means of greatly increasing the returns of ore. California Gold, 9-16ths to 11-16ths; the mill run this week of 500 tons yielded 1100t.

Ruby and Dunderberg, ¾ to 1; the weekly report does not advise any change of moment at the Home Ticket. The usual outturn of ore has been maintained. The tributaries at the Dunderberg are doing well, 30 tons having been sent down since last report. The ground at the Lord Byron continues very hard still, thus delaying the work at this mine.

Kohinoor and Donaldson, ¾ to 1; the manager at the mine reports that he has had the engine at the new mill put under steam to try the working of the machinery now well nigh complete, and states that it is of sufficient power to drive with ease not only the machinery now in place, but also when required a duplicate of the present plant, which when added would render the mill capable of treating 100 tons of ore per day.

Victoria Gold (Venezuela), ¾ to 1; Vice-Admiral R. Ashmore Powell, C.B., who left this country in November for the purpose of inspecting this property, has forwarded a telegram, which arrived at the company's offices on Tuesday—"Mine exceedingly rich." This information is considered highly satisfactory to the executive, and the results of the first stamping looked forward to with renewed confidence.

In Lead Mine Shares there is virtually nothing doing, and quotations are entirely nominal. Lead appears to have a somewhat firmer tendency, but there has been no improvement in price. Vans are quoted 3½ to 3½; Great Laxey, 9½ to 10½; Weardale, 1½ to 1¾. Tankerville, ¾ to 1; the discovery recently made at the 244 fm. level, on the main lode, is being laid open for about 3½ fms. in length, and for the width carried (5 to 6 ft.) it is worth 2 tons of lead ore per fathom in the east end, and 1½ ton in the west end; and the winze below the 232 is worth 3 tons per fathom. This looks well for finding rich deposits of lead both at the junction in length and depth.

Roman Gravels, 5½ to 6½; the managers report that the various levels and ends are producing their usual quantities of ore, and a considerable improvement is expected in the ends of the 95 and the 80 south in the next 3 or 4 fms. driving.

The Bank of Egypt directors, subject to the passing of the accounts by the auditors, have decided to recommend a dividend of 9 per cent. for the year ended Dec. 31, of which an interim dividend of 2½ per cent. has already been paid, leaving a balance of 4222d. 6s. 7d. to be carried forward to the next account.

Notice is given that the Tourney to Jurbise and Landen to Hasselt Railway Company's receipt tickets given for the deposit of "talons" can now be exchanged for the new sheets of coupons.

It is notified that the interest due Feb. 1, on the Five per Cent. (Tirek Extension) Debentures, of the Ottoman Railway from Smyrna to Aidin, of his Imperial Majesty the Sultan, will be paid at the company's offices in London, and the scrip will be exchanged for the Definite Debentures, with coupons attached.

Referring to the New Atlantic Cable, Messrs. Mackay and Gordon Bennett have concluded a contract for the use of the Muirhead patents, for the duplex working of their two Atlantic cables, whereby the carrying power of the cables will be practically doubled, in other words, that Messrs. Mackay and Bennett will have an effectual power of transmission equal to four Atlantic cables by using that duplex system. The apparatus for thus increasing the transmitting capacity of the cables is being manufactured by Latimer, Clark, Muirhead, and Co., of Westminster.

The London Cordage, Sack and Wagon Cover Company directors have declared a second interim dividend for the half-year ended Dec. 31, at the rate of 10 per cent. per annum on the paid-up capital of the company, payable at the offices of the company on and after Feb. 1.

The London, Chatham, and Dover Railway accounts for the past half-year were on Wednesday submitted to and approved by the board and, subject to final audit, they show a balance available for dividend of 171,500/, as compared with 162,500/ for the corresponding half of 1882. The directors propose that a dividend of 2½ 5s. per cent. for the half-year be paid on the Arbitration Preference stock, carrying forward 45,800/ to the credit of the current half-year, as compared with 36,800/ corresponding period of last year.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, has been:—Babu (Limited) Ordinary, 22½ to 22%; Bombay (Limited), 6½ to 8½; ditto, ditto, New, 4%; British, 30½ to 40½; Buenos Ayres New (Limited), 10½ to 10¾; Commercial New Stock, 17½; Continental Union (Limited) Original, 32½ to 33½; ditto, ditto New, 1869 and 1872, 23 to 23½; ditto ditto per cent. Prel., 29; Gas Light and Coke, A, Ordinary, 20½ to 20¾; ditto, B, 10 per cent. Prel., 22½ to 22½; ditto, H, 7 per cent.

Max., 14½ to 14½; ditto, J, 10 per cent. Prel., 22½%; ditto, 8 per cent. debenture stock, 150 to 152; Imperial Continental, 18½ to 18½; Monte Video (Limited), 16 to 18½; Oriental (Limited), 7½ to 7½; Rio de Janeiro, (Limited), 24½ to 25½; South Metropolitan, A, 24½; ditto, B, 21½ to 21½; ditto, Permanent 8 per cent. debenture stock, 126½ to 127. Gas stocks firm, especially Imperial Continental, very little offering.

INSURANCE SHARES have, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—City of London Fire (Limited), ½ to 1½; Commercial Union, 18½ to 18¾; Eagle, 6½; Employers' Liability Assurance Corporation (Limited), 2½ to 2½; Fire Insurance Association (Limited), 2½ to 2½; General Life and Fire, 3½; Globe Marine (Limited), 1½ to 1½; Guardian Fire and Life, 6½ to 6½; Liverpool, London, and Globe (Life, annuity), 2½; London, 56½ to 56½; London and Provincial Fire (Limited), ½ to ½; ditto, ditto, Marine (Limited), 1½ to 1½; National Marine (Limited), 2 to 2½; North British and Mercantile, 2½ to 2½; Ocean Marine, 6½ to 8½; Standard Fire Office (Limited), ½ to ½; Universal Marine (Limited), 6½ to 7. Insurances steady; Marine companies firm upon good reports which have just been issued.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. J. Abbott, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

RAILWAY AND GENERAL MARKETS.—Referring to the course of business done to-day during official hours (11 to 3) Mr. Ferdinand R. Kirk Birchingley writes:—*Owing*: American railway shares have the same undecided tendency as they had yesterday and the day previous. Pending the deadlock at New York the public here are neither buying nor selling to any considerable amount. Erie, 25½ to 26; Reading, 27½ to 27½; Denver, 21 to 21½; and Atlantic Fire, Mortgage, 4½ to 4½; Great Eastern are 6½ to 6½; and Brighton, A, 10½ to 10½, showing no change. Trunks are rather in demand, the Ordinary now being 15½ to 16½, and the Third Preference 37½ to 37½. Apart from a recovery in United Mexican and Devon Great Consols, mining shares have had a downward tendency. Bratsberg, 1½ to 1½; Akankoo, 6s. to 6s.; Colombian Hydraulic, 4s. 6d. to 5s. 6d.; Callao Bis., 12s. to 14s.; Old Shepherds, 4s. to 6s.; East Wheal Rose, 3s. to 5s.; House Mines Trust, 15s. to 12s. 6d.; Wheal Grebar, 1½ to 1½. *Closing*: Trunks continue 55m. the Second Preference being now 7s. and Thirds 3s. Erie is quoted 26 to 26½; Richmond, 4½ to 4½; Ruby, 2½ to 2½; Eston, 1½ to 1½; Colorado, 2½ to 2½; Copiapo, 2½ to 3½; Emma, ½ to 1; Frontino, 1 to 1½; La Plata, ½ to ½; Potosi, 3s. to 4s.

IRON IN NEW SOUTH WALES.—In our advertising columns will be found a remarkable invitation addressed to the ironmasters of Europe and America by the Government of New South Wales. This prosperous colony is very rich in iron and coal of excellent quality. The Government has within a few years constructed over 1200 miles of railroad, and more than 500 miles are in course of construction, all the materials for which, except the sleepers, have been imported at a heavy charge in the way of freight, &c., from England. These charges should operate as a large "protection," and afford great inducements to enterprising men to embark in the manufacture of iron and steel in the colony. It is stated that 1,250,000 tons of iron and steel, inclusive of permanent way material, have been imported into New South Wales and Victoria within the last 10 years. The Government has determined to make a bold experiment to naturalise the iron industry in the colony, and has, in the terms of the notice which we publish to-day, called for tenders for 150,000 tons of steel rails (or any portion thereof) to be manufactured in the colony from New South Wales ores. Printed copies of preliminary specifications, conditions of contract and other particulars may be had from the Agent-General of the colony, Sir Saul Samuel, K.C.M.G., Westminster Chambers, Victoria-street, London, S.W., by ironmasters and others desirous of obtaining authentic information on the subject.

OSCAR GOLD MINING COMPANY.—The prospectus of this company has been most favourably received. The latest news from Norway also states that great excitement continues there respecting this wonderful discovery of gold. It will be seen by our advertising columns that the list of applications for shares will close on Wednesday next, 30th inst.

BRATSBERG.—An excellent report from the managers has been received this week. The aggregate value of the various points in operation is nearly 550,000/. This will soon be increased by the resumption of work at several rich places. The dressing of ore continues as usual, and there is a cargo at Skien waiting shipment, with another lot to follow next month.

CATHEDRAL CONSOLS MINE.—This mine is deserving of special attention. At the end of the present month the shaft will be down to the depth necessary to start the cross-cut to the Old Mine lode, which, when worked on above by the old workers, was reported by the late Capt. Jennings to average 11 ft. wide west and 6 ft. wide east. Another important feature is the extension of the 50, which, being in easy ground, was driven last month 9 fms. In about 25 to 30 fms. it will come up parallel with the rich bunches of copper ore taken away in West Damsel. Captain Jennings considered Cathedral "one of the best pieces of unwrought mineral ground in the neighbourhood," which is Gwennap.

WHEAL BENNY.—The new ground extending towards Devon Great Consols, which has recently been acquired will, writes a correspondent, enable the mine to be worked 200 fms. beyond the old boundary. The lode in that direction is producing 4 to 5 tons per fathom of tin and arsenical ores at the deep adit. Every fathom driven on the lode improves, and in sinking no doubt is entertained of meeting with a great deposit of ore near the junction of the lode with the cross-course at about the same depth where Devon Great Consols made so wonderfully rich many years ago.

#### VALUABLE COPPER MINES.

REQUIRED, ONE OR TWO GENTLEMEN who could FORM A COMPANY for WORKING a MOST VALUABLE COPPER MINE, with several lodes of ore yielding 28 units. As the mine can be successfully developed with a moderate capital, Advertiser would also join some capitalists wishing to secure a genuine and profitable investment.

Address, "Copper 11,247," care of Messrs. Wm. Dawson and Sons, Advertising Agents, 121, Cannon-street, London, E.C.

**M. R. W. MARLBOROUGH, STOCK AND SHARE DEALER,**  
29, BISHOPSGATE STREET, LONDON, E.C. (Established 30 Years)  
Can SELL the following SHARES at prices annexed:—  
50 Akankoo, fully paid, 20 Frontino, £1 7s. 6d. 100 Potosi, 4s.  
8s. 6d. 20 Gunnislake (Clitters), 50 Parry Corpora., 2s. 6d.  
25 Birdseye Ck., £1 5s. 21 12s. 6d. 25 Ruby, 16s. 6d.  
20 Bratsberg, £1 18s. 25 Home Mines Trust, 10 Richmond, 24 10s.  
50 Colombian Hyd., 5s. 9 10s. 6d. 10 Roman Gravels, 25 ½%.  
40 California Gold, 12s. 6 20 South Darren, 10s. 6d. 20 United Mexican £1 10s.  
75 Corporation of South 10 Leadhills, £2 17s. 6d. 20 Sortbridge Con., 2s.  
Australian Copper. 25 New Trumpet Consols 50 So. Caradon (Ltd.), 12s.  
50 Callao Bis., 12s. 9d. 20 Lisbon-Berlyn, 4s. 6d. 25 So. Devon, 7s. 6d.  
30 Chile Gold, 12s. 20 Mount Bay, 3s. 20 Tankerville, 1s. 9d.  
100 Chontales, 4s. 20 Nuevo Monde, 4s. 3 20 Tolima A, cum div., 10s.  
25 Colorado, £2 7s. 6d. 20 New Emma, 20s. 20 do B.  
30 Carn Camborne, 20s. 6d. 75 New W. Caradon, 3s 6 10 United Mexican £1 10s.  
10 Devon Con., £3 10s. 50 Old Shepherds, 6s. 50 West Crebri, 4s.  
50 Dev. Friendship, 3s. 20 Organos, 16s. 6d. 50 West Caradon, 3s.  
20 Drakesfalls, 5s. 6d. 10 Panucillo, £1 17s. 6d. 10 Wheal Grebar, £1 7s. 6d.  
10 Eberhardt, 7s. 3d. 100 Fort Phillip, 2s. 3d. 25 Western Andes Gold  
25 East Blue Hills, 3s. 6 25 Prince of Wales, 10s. 3 25%.

VICTORIA GOLD (Venezuela).—I strongly recommend the immediate purchase of these shares for an important rise; also CORPORATION OF SOUTH AUSTRALIAN COPPER.

PURCHASES FOR FORWARD DELIVERY AT SPECIAL PRICES ON RECEIPT OF DEPOSIT OF 20 PER CENT.

BUYER of any part of 250 VICTORIA GOLD (Venezuela).

BANKERS: ALLIANCE BANK (Limited).

HORACE J. TAYLOR, 38, GREAT ST. HELENS, LONDON, E.C., STOCK AND MINING SHARE DEALER.

Offers FOR SALE the undermentioned, at annexed prices:—

Bratsberg, £1 18s. 3d. Flagstaff District, 2s. Frontino, 1s. 7s. 6d.  
California Gold, 12s. 3 Gold Coast, 8s. Organos, 16s. 3d.  
Callao Bis., 12s. 9d. Gunnislake (Clitters), 2s. 6d. Parry, 2s. 6d.  
Chile Gold, 12s. 21 12s. 6d. Prince of Wales, 10s. 6d. Potosi, 4s. 6d.  
Chontales, 4s. 20s. 6d. Sortbridge, 2s. South Darren, 11s. 3  
Colombian Hyd., 5s. 9 10s. 6d. 20 Devon Utd., 7s. 6d. Trossavean, 5s.  
Corporation, So. Austra. Copper, 10s. 6d. Victoria Gold, 17s. 6d.  
Devon Consols, £2 6 3 La Plata, 14s. Wheal Grebar, 21 12s. 6d.  
Devon Friend., 2s. 9d. Mono Consols, 3s. 6d. 20s. 6d. Victoria Gold, 17s.  
Drakesfalls, 5s. 20s. 6d. Mounts Bay, 3s. Wheal Grebar, 21 12s. 6d.  
East Blue Hills, 3s. 2d. New Emma, 20s. 20s. 6d. Wheal Grebar, 21 12s. 6d.  
East W. Rose, 4s. 3d. Nouveau Monde, 4s. 20s. 6d. Wheal Grebar, 21 12s. 6d.  
Eberhardt, 7s. 3d. Old Shepherds, 6s. 20s. 6d. Wheal Grebar, 21 12s. 6d.  
Tolima A and B Shares and CORPORATION SOUTH AUSTRALIAN COP- PER are particularly recommended.

BANKERS: CENTRAL BANK OF LONDON (Limited).

MESSRS. PENNINGTON AND CO., SWORN BROKERS AND SHARE DEALERS, 13, MOORGATE STREET, LONDON, E.C.

BUSINESS in all DESCRIPTIONS OF STOCKS, MINING and other SHARES.

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#### C. PASS AND SON, BRISTOL.

ARE BUYERS OF

LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS, ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c., and DROSS or ORES containing COPPER, LEAD, AND ANTIMONY.

#### GEO. G. BLACKWELL,

26, CHAPEL STREET, LIVERPOOL,

HANDLES

MANGANESE, BARYTES, SPARS, and ALL ORES on SALE or PURCHASE.

#### EDGAR JACKSON,

(Associate Royal School Mines).

## ROYAL MINING ACADEMY AT CLAUSTHAL (GERMANY).

72ND SCHOLASTIC YEAR, 1883—1884.

The PRACTICAL PREPARATORY COURSE and the LECTURES of the SUMMER HALF-YEAR will COMMENCE 24th APRIL, 1884.

Programmes to be had (gratis) of The Director—

BERGRATH DR. v. GRODDECK.

## NOTICES TO CORRESPONDENTS.

**POTOSI GOLD.**—An agreement has this day been signed by which all litigation between the Chile and Potosi Gold Mining Companies ceases, and the two companies will in future work in harmony with each other. As witness our hands this 23rd day of January, 1884, E. L. J. Blisdale, Chairman Potosi Gold Mining Company (Limited); John Harvey, Chairman Chile Gold Mining Company (Limited).

**PAICE OF MINE SHARES.**—Can you, through the correspondence column of your Journal, give me any information why Great Hollways are quoted in your mining list at 5 to 5½%, and in the same paper, under the heading "Scotch Mining, &c.," are given at 40s. to 50s.? Now, the latter price is the correct one, as I have been offered shares at these prices by several dealers for some time past, but still there has been no alteration in your official list. It seems rather an anomaly to me, and I should be obliged if you could give me any information with reference to it.—S. N., Chesterfield. [The quotations given in the Share List are those supplied from the company's offices as the prices at which transfers have been registered. In the present condition of the lead market some holders are willing to sell at any price.]

**FOUNDERS' SHARES.**—K. R. Z.—There is certainly nothing of which the ordinary shareholders can reasonably complain in the way the founders' shares are dealt with—they are to be simply extinguished. The statement of present capital and proposed distribution of new capital is given in another column.

**UTILISATION OF SLATE RUBBISH.**—A letter addressed to Messrs. Shepherd and Aspinwall, Nantile Vale, with reference to their patent for converting slate rubbish into artificial stone, has been returned "insufficient address." Will they kindly send exact postal address.—B. B. S. and S. Co.

**COLORADO UNITED.**—Replies to a question asked by your correspondent "Fisher," in last week's Journal, I beg to inform him that the dividend of 1s. per share paid to the shareholders in May last was paid out of the product of the mine. Had he carefully read the last balance-sheet issued by this company he would have seen that it was only made up to March 31, 1883, and therefore could not take into account a dividend paid six weeks after that date.—DANIEL NORRIS, Secretary.

**Received.**—J. R. (Old and New Placers): Never received, please send duplicate. Present letter not dated, but see from postmark that it was sent Jan. 8. Kapanga next week; just going to press—"S. F." "K.C.B." "Shareholder" (Bristol): As meetings of the mines of the East Wheal Rose group, to which you refer, will be held next week, you will then, no doubt, obtain the information you require—"G. T." (Carlisle): ditto—"Shareholder" (Ayr): It is always preferable to use initials than "Shareholder"; we have about 14 using the same signature this week; we have inserted your letter over initials—"H. J.": You cannot get anything better than Newth's Natural Philosophy and study it carefully, then the Steam-Engine, in Cassell's series—"G. H. O."—"G. B. B."—"C. M." Toronto.

veloped, it is a veritable mine of wealth. We guarantee that no prudent railway chairman or director would think of returning back to the old third-class fares; and we venture to prophecy that if the same policy was adopted with respect to the mineral and goods fares the same happy result would follow—a large increase of business, in which the manufacturer and the railway would equally benefit. This, then, is one important question which we may expect to see occupying the attention of the Legislature next session, and upon which, doubtless, pronounced action will be taken, more especially as the measure has been taken in hand by the President of the Board of Trade—a gentleman who is not likely to be thwarted in what he believes for the best commercial interests of the country by railway directors, however loud in their denunciations.

Turning to colliery matters, there are one or two questions which we should like to see receiving further Parliamentary consideration and decision. The great object in the winning of coal is to do so with a minimum loss of life. Colliery proprietors have unquestionably been harassed a good deal of late years by what all practical men cannot but regard as unnecessary and uncalled-for restrictions and regulations. If some of our prominent representatives had only been equally solicitous in their efforts to prevent colliery explosions as to impose fines and penalties for the breach of impractical rules and regulations, much more good would have resulted. Without now quoting facts or statistics, we may allege, without fear of contradiction, that defective lamps and shot-firing bring about by far the greater number of explosions, and, consequently, loss of life. And yet our Government has scarcely taken single step to insist upon the adoption of precautionary means in this direction. We are quite aware that a really "safe safety lamp" has not yet been invented—that is to say, one which may be depended upon under all and every circumstance. But we do not think it would be any very great stretch of Government jurisdiction to offer some substantial inducement to incite mechanical and scientific ingenuity in the perfection of a lamp which should answer every requirement of the collier. And a standard lamp being once adopted, its use should be strictly enforced by Parliamentary enactment, and every other lamp condemned. With the same object in view, shot firing—all blasting operations in mines—should be prohibited under any and every circumstance, any breach being severely punished. With such regulations enforced we should soon see a marked diminution in the number of explosions, and, consequently, valuable lives spared and much destruction of property prevented.

The Employers' Liability measure, although doubtless framed with the best intentions, is found, in its practical operation, to harass and perplex the manufacturers and large employers of labour in a manner which few of the uninitiated have any conception. Some of its provisions press with undue severity, and should be modified if it is intended to meet with the cordial acceptance of all classes. It is a question which must, sooner or later, push itself to the front and demand Legislative attention, as scarcely a county court is now held in any important manufacturing centre in which employers are not sued for damages for accidents altogether beyond their control. Other questions of vital moment to the manufacturing and commercial interests of the country will doubtless be brought forward, and the next session, which opens on Thursday next, the 5th proximo, will be one of the most important, as regards home legislation, for many years past.

## WEST RIDING COAL FIELD, AND PORT OF GOOLE.

With the prospect of increased competition for the coal traffic from the West Riding for shipment from the Humber, as well as for local requirements, the Aire and Calder Navigation Company have brought forward an important scheme for widening and deepening the channels and increasing the dock accommodation. This they propose doing at a cost estimated at 250,000£, and for which an Act of Parliament is to be obtained. The money, it is expected, will be borrowed at from 3 to 3½ per cent. interest, and on the understanding (provided in the Act) that the dues charged shall not produce more than a maximum return of 5 per cent. on the capital expended. The terms offered by the company appear to be exceedingly fair, and as the improvement will be carried out under the superintendence of Mr. BARTHOLOMEW, the well-known engineer, who knows every part of the route, they will be most complete and thorough, and of great advantage in the shipment of coal more especially. Briefly stated, the improvements will include the deepening of the channel, so as to allow vessels of large size to come up at all times, whilst the navigation of the Ouse between its confluence with the Trent and the port of Goole will be made comparatively easy. Owing to the limited depth of the water in some places vessels at times are stopped in their passage, and, of course, at considerable loss, as some of them have to be lightened. The consequence is that the insurance rates are higher to Goole than to other ports close to the sea. The deepening of the river and the other improvements contemplated will, however, have the effect of making Goole one of the best and most important inland ports in the kingdom. At the present date it ships large quantities of coal from the South Yorkshire district to London and other home ports, and in this respect exceeds the exports from Hull and Grimsby combined. Goole is in fact the nearest shipping port from all parts of the West Riding, and vast quantities of coal are now sent from several districts, the facilities for loading vessels being of an exceptional character, so that a cargo of 300 or 400 tons can be discharged into the hold of a steamer in considerably less than two hours. But Goole is likely to be still further benefited by having a coal field quite close to it.

From the exhaustive report of the Royal Commission it is stated that the eastern limit of the Yorkshire coal basin extends to the neighbourhood of Snaith and Drax, only some six miles from Goole by railway. The coal lies under the magnesian limestone, and a bore-hole put down to a depth of 400 yards on the estate of Lord BEAUMONT gave most satisfactory results. After going through the New Red Sandstone, Upper Permian, marlites and other strata, the borer pierced 68 yards of Lower Permian limestone, when the carboniferous measures were touched, giving coal measures, sandstone, blue shale, black shale, then 18 in. of coal, with spavin and blue shale. Mr. GREAVES, the mining engineer, who conducted the operations, considers that the beds penetrated beneath the Permian rocks were the coal measures, whilst there were strong indications for believing that they belonged to that part of the coal measures which contained workable seams of coal. The general character of the measures, the few fossils brought up in the cores, and the clean and lustrous character of the thin seam of coal which was passed through, pointed most forcibly to this conclusion, and that in the future the best portion of the Yorkshire coal field would be found between Barnsley and Snaith. It is, however, expected that boring will, before long, be resumed on the same estate, and that the Barnsley Nine-feet seam will be met with at a depth that will make it easily workable. With such a prospect the Navigation Company owning the port of Goole are more than justified, it will be admitted, in improving the rivers connected with it, as well as extending the dock accommodation, for in the event of a coal field being opened out at Drax and Snaith, it would become a most formidable rival even to

Newcastle, more especially as regards the coal traffic to the Metropolis, to which it is so much nearer. In conclusion, it may be stated, that the Aire and Calder Navigation was opened in 1827 (but of course frequently and greatly improved since then), and the Knottingley and Goole Canal in 1826. The dues have greatly increased during the last few years, and the last annual return gave them at something closely approximating to 3,000,000 tons.

On Wednesday the standing orders applicable to the Ouse Improvement Bill were stated by the Examiners of Petitions to have been complied with. There is no impediment, therefore, to the Bill being introduced to Parliament in the early part of the session.

## THE BREAKING OF MINING WINDING-ROPES.

Of the many fatalities resulting from mining operations those from the breaking of winding-ropes are of comparatively rare occurrence. This might be expected, seeing that there are simple appliances that effectually prevent them, and precautions for the same purpose are provided by Act of Parliament. Still, last week we had to record an accident, resulting in the loss of 11 lives by the breaking of a winding-rope. The rope consisted of six strands of seven cords each, and when lifting coal the usual weight was 47 cwt., but when it broke the weight was only 30 cwt. The Mines Regulation Act provides that the ropes which are in actual use shall be examined at least once in every 24 hours, and in many mines this is done every morning before the men are let down. The Act also states that the result of such examination shall be recorded in a book kept at the mine for the purpose, and shall be signed by the person who made it. Whether this was done at the Garnant Colliery we cannot say, but it may be taken as a fact that when ropes are good, and not overworked, and have proper attention paid to them and other mechanical details connected with their application, there is no safer method of ascending and descending pits. But the danger arising from ropes or chains breaking can be prevented by the use of safety-cages, of which there are several patented, the oldest being those of FOURDRINIER, WHITE and GRANT, OWEN, &c.

OWEN'S apparatus is connected by rods to the rope, so that if the rope breaks the rods fall, and the two levers are forced down by a spring, causing the end of one of the levers to pierce into the conductor-rods and so hold the cage fast. This cage at one time was to be found in many collieries in Lancashire, and probably is so now; it saved many lives. WHITE and GRANT'S has an eccentric, which is kept from the guide by a chain whilst the cage is suspended. When the chain slackens the spring forces the cog against the guide, when the weight of the load forces the teeth of the eccentric into the guide. This system has been adopted at many places, and with marked success so far as the saving of life is concerned. With the simple appliance within reach, and with the precautions which should be taken at all mines before work is commenced in the morning, it certainly appears that accidents or loss of life from the breaking of ropes in shafts of mines should be all but impossible.

## SINGULAR COLLIERY FATALITY FROM NEGLIGENCE.

It is not often that one hears of corves being allowed to drop down a shaft owing to the absence of the cage, yet this was the case on Monday last at the Morley Main Colliery, near Leeds. It appears that two or three seams of coal are worked, one being entered intermediate in the shaft some distance from the bottom. The hanger-on at one of them got into the cage from the intermediate seam to find something he required at the bottom, and just as the cage reached the latter there was a heavy fall of material, which drove the deceased, Thomas Thompson, into the sump. There the body was found, along with two corves in a broken state. It appeared that a hurrier in the intermediate seam pushed two corves to the shaft believing that the cage was there to receive them. The consequence was that the corves fell to the bottom just as the deceased was getting out of the cage, and striking him forced him into the sump along with the corves and fallen material. Jackson, the hanger-on at the intermediate seam when the cage went down, should have shut a gate that would have closed that part of the shaft, so that the corves could not have fallen down. His not having done so was an act of gross negligence, and resulted in the loss of one life and might have been far more serious. Indeed, the deputy who went down with the deceased had a most narrow escape. An inquest was held on the body of deceased on Wednesday, at which Mr. Waddell, the Government Inspector, was present. The jury returned a verdict that Thomas Thompson had met with his death through Jackson's negligence. The Coroner said this was in fact a verdict of manslaughter, and a verdict to that effect was recorded. It may be stated that every provision was made for the prevention of such an accident by the proprietors of the mine, there being a place marked for the corves to come, and sprags placed for the purpose of blocking the wheels. But it would appear that no provision can be made for recklessness or negligence; but an example being made by imprisonment may have more effect than rules, bye-laws, or fines.

## NEW MINING INDUSTRY IN IRELAND.

The mining industries in Ireland have for many years past been in a very unsatisfactory condition, not so much through want of enterprise, or the required capital, but by a combination of circumstances. Formerly a most thriving mining industry was carried on in the county Wicklow, at the copper mines at Ballymurtagh, Owca, the property of the Wicklow Copper Mine Company, which have yielded vast quantities of ore, and afforded employment to a large local mining population; but since the introduction of ore from Spain this industry in Wicklow may be said to be—at least for the time being—almost extinct; though it is by no means improbable at some future date they will be again revived. There, however, exists in these mines extensive deposits of iron ore, in the form of yellow ochre; the trade carried on in this mineral is supplied chiefly from mines in England and Wales. Yellow ochre enters largely into the manufacture of paint and the colouring of paper. From the energetic measures that are now being made to open up these ochre deposits in Wicklow it bids fair that in the future Irish ochres will take a prominent position in the market. This ochre is in the form known as rock ochre, similar to that found in the neighbourhood of Oxfordshire. To reduce it to an impalpable powder special machinery of the most improved type is now being erected at the chemical works of the Wicklow Copper Mine Company, at Arklow, which will be capable of preparing for sale about 1000 tons of ochre per annum. It is contemplated erecting machinery for making casks for the requirements of this business, which will effect a considerable saving in cost over manual labour. The prospects of the successful development of these ochre mines has been materially increased by a discovery, which has recently been patented by Mr. JOHN C. STANLEY, of St. Martin's-lane, by which the hitherto valueless mud which accumulates in rivers can be utilised; it is found that so excessively polluted is the River Thames with the sewage of London that the mud contains an amount of nitrogenous matter. In the process of treating the mud a compound is formed by adding a mixture of iron ore; that from the mines of Wicklow has been found to be specially suited for the requirements of this new manufacture. When calcined a brown colouring matter is formed, which is suitable for the purposes of colouring brown paper; the nitrogenous vapours will be collected and converted into ammonical compounds. A company is now being formed to acquire this valuable patent, and works will be erected on the banks of the Thames to treat the mud on an extensive scale.

There is little doubt but that there exists in Ireland vast quantities of undeveloped mineral wealth which, if properly opened up, could be worked to considerable profit, every element being in favour of mining in Ireland, where there are ample supplies of water, timber, labour, &c. If but a fractional part of the capital annually invested in the numerous mining projects that are from time to time brought out was but invested in our home industries, either mining or manufactures, the country at large would be benefited instead of enriching foreign countries. Ireland offers to capitalists an opening for the establishment of manufacturing and mining industries, the want of employ-

THE MINING JOURNAL,  
Railway and Commercial Gazette.

LONDON, JANUARY 26, 1884.

## THE COMING SESSION.

During the Parliamentary interregnum it is the privilege of the journalist to direct the attention of the various representatives of the great mining and manufacturing interests to questions of pressing moment requiring solution or modification. For the past two or three sessions useful home legislation has been seriously impeded by the prolonged discussions which have been carried on in reference to the unhappy condition of Ireland. The House, however, is now armed with measures which will prevent, to some extent, at least, the obstructive policy of Irish agitators, and we may, therefore, look forward pretty confidently to the next session as affording the opportunity for the discussion and settlement of questions which have long pressed for calm consideration, and which are intimately associated with the great commercial and manufacturing interests of the kingdom. Of one thing we may be certain, and that is that the several heads of the departments are fully alive to the vital importance of further legislation affecting our trade and commerce, and are pledged to do their utmost to secure immediate action in reference thereto.

In our last number we drew attention to the important question of railway freights and fares, urging upon our great railway companies the policy of making such concessions and granting such increased trading facilities as would satisfy the just claims of the manufacturers and traders of the country. We urged that Chambers of Commerce and the various representative bodies should take the matter up with the view of supporting the Right Honourable JOSEPH CHAMBERLAIN, the President of the Board of Trade, in the important question which he is pledged to bring forward at the earliest possible moment. Already is the ball set rolling, which we believe will increase in momentum until it shall obtain an answer in practical legislation, fixing standard carriage freights at much lower terms per mile than at present, and compelling further facilities at the hands of railway companies than they now appear willing to grant. A most important meeting of traders connected with the iron, coal, and hardware trades of the Midland counties was held at Birmingham a day or two since, when a "Freighters' Protection Association" was formed, the object of such Association being to raise a guarantee fund for all purposes connected with the objects of the Association, (2) to report to the railway companies the many cases of hardship to which traders are subject, and to show that their true interests would be best served by assisting rather than crushing the traders and manufacturers of the district, and (3) to assist individual traders, being members of the Association, in dealing with cases of unequal or excessive charges. At this important meeting of manufacturers and traders many instances were cited of the way in which our inland ironmakers, &c., are handicapped by these excessive railway freights, and how they prevent that expansion of trade which would otherwise ensue. For instance, the Chairman (Mr. ALFRED HICKMAN, the Chairman of the Wolverhampton Chamber of Commerce) stated that the freight of corn from Chicago to New York, a distance of 960 miles, was only 16s. per ton, the same as charged from Birmingham to London, just one-eighth of the distance. It was also stated that English freights were at least double those on the Continent. Statistics were also quoted which showed that every ton of pig-iron produced in the Staffordshire district paid 10s. per ton railway carriage; every ton of manufactured iron 15s. per ton; and every ton of finished hardware 55s. per ton. Every unprejudiced mind must be at once convinced that with such a heavy millstone hanging around the necks of the manufacturers they can scarcely expect to compete with the Continental and American makers, and the wonder is that they are not crushed out of existence by such oppressive freights.

The question of freights is one of such vital importance, not only to the manufacturers and colliery proprietors of the country, but of the railway companies as well, that our readers will doubtless excuse us for endeavouring still further to press home the question. We contend that all past experience proves that the soundest commercial and railway policy would be a substantial reduction in all mineral and manufactured traffic. The nimble penny is far better every way than the laggard sixpence. Reductions always vastly benefit and increase trade. Only a few years ago the third-class passenger traffic was despised; but now, though only partially de-

ment being the primary cause of the various schemes of emigration, the result would be to rapidly deprive the country of its bone and sinew. As success brings success, possibly the opening up of these ochre deposits in Wicklow may be the forerunner of an awakened energy to develop mines and manufactures in other parts of the country.

#### OWEN VEAN AND TREGURTHA: OR, AS AT DOLCOATH, TRYING FOR TIN UNDER COPPER IN A DISTRICT RICH IN MINERAL.

"The ant within its cavern deep,  
Would bid us labour too,  
And writes upon its tiny heap,  
'There's work enough to do.'—BURBIDGE.

The Cornish miner, the main portion of whose life is spent deep down in the bowels of the earth, has been—oft-times and most appropriately—compared with that particular portion of the ant-tribe who burrow for themselves "caverns deep" in the earth wherein to lay up their stock of summer-collected food for the long months of winter, and also where they comfortably repose from their labours until the warmth of the spring sun gives them warning that they may safely appear again on the surface. Unlike the ants, however, the mineral searcher goes underground to work, and not to sleep; to extract from the soil those metals—coal, iron, copper, tin—without which our homes would be so uncomfortable and so deficient. Unfortunately, of late years it has been impossible for anyone who has been accustomed to come into our westernmost English county not to be painfully conscious, for many reasons, that the heaps which the miner-ant has thrown up from far below the earth's surface have not by any means borne upon their faces the impression that "there's work enough to do." For these huge piles of iron-stained earth and stone, which we see in every direction as we are whirled along through the country in a fast-speeding train, have, in most instances, been evidently untouched or added to for many years past, and the neighbouring remains of lofty buildings in which the ceaseless throbbing of steam-engines was formerly heard, testify, as they day by day silently crumble into ruin and decay, that work has been suspended, perhaps never to be resumed. It is unnecessary in a mining district such as this in which we live to dilate in any way upon the gradual, though only too sure, diminution in the amount of work which our mining industries formerly afforded to hundreds and thousands of persons, who have since had to seek their livelihoods in foreign lands, or accept the alternative of going into the workhouse; and perhaps in few parishes in the county are there more surface evidences of the work once done by these toilers of the soil than appear to the wayfarer as he travels along past Marazion on the way to Helston or Falmouth.

As one journeys eastward along that road one can but compare in imagination the busy days when the ships of the hardy Phoenicians crowded Mount's Bay, and troops of men were employed in transporting the precious tin from its storehouses on St. Michael's Mount to vessels which were to bear it away far over sea, with the present desolate-looking monuments of departed prosperity and vanished fortunes which greet our eyes in the present day on hill or dale, look where we will: 50 years ago the neighbourhood of Market-jew was ever noisy with the sound of hissing steam, the thumping of stamping machinery, and the rumbling of heavily-laden wagons bearing tin ore to the smelting-houses. To-day a depressing silence reigns almost supreme there—at any rate, so far as mining is concerned; and, as one who takes a more than ordinary interest in this western land, it was with infinite satisfaction that, during a casual ramble a few days since, I saw, not far off the main road and near to the village of Goldsithney, a newly-erected engine-house and other works, which on enquiry I found to belong to the recently-started mine of Owen Vean and Tregurtha Downs. Plenty of leisure and an equal amount of curiosity led me to decide on a closer inspection; so, at the risk of a prosecution for trespass, I immediately made a bee-line across fields and over hedges until I found myself in the middle of the mine and among a crowd of busy workers. Accosted by one in authority I was fain to admit that my business on the spot amounted to *nil*, and I could only plead curiosity and the pleasure it gave me, as a frequent visitor to Marazion and the neighbourhood, to see once more springing up amid the many wrecked mines visible in the distance, whichever way one looked, an industry which—it could be seen at the merest glance—was affording occupation to a considerable number of people, and which, as I subsequently discovered, is likely in the future to be a source of livelihood for many more. My knowledge of Cornish courtesy and that innate politeness which seems part and parcel of the general run of Cornishmen, assured me that there would be no fear of my being peremptorily ordered off the property, and I was not mistaken; for the genial and healthy-looking "captain" bade me to "look round as much as I had a mind to," and he added the kindly information that the manager "had gone home to dinner, but was shortly expected back, and would tell me anything and everything I had a mind to ask him." Accepting the permission to look round I wended my way across the yard formed by excellently-lighted and fitted-up smiths' and carpenters' shops, magazines, and storehouse, and passing through a prone forest of "rods" and timber for shaft purposes, reached the substantially-built engine-house, and entered the portals.

All within is clean, neat, and shining; the windows are brightened with thriving geraniums, and the engineer is polishing the bright work, which is glistening like looking-glass in every direction, with a vigour as if his life depended upon this, while he smilingly informs me that the steel fittings are still unfinished, and points out where huge plates of the shining metal are to go by-and-bye, meaning more work, more polishing, and more perspiration. In reply to my inquisitiveness Mr. Engineer informs me—his face lighting up with pride—that the engine was always considered "old Capt. Will. Grose's masterpiece," who that possibly departed gentleman may be, or may have been, I wot not. Further, that it was originally constructed for Wheal Alfred, was transferred to Crenver and Wheal Abraham, and came thence to its present habitation.

Coming down to dry facts, I am also informed that this pumping-engine is of 80-in. cylinder, steamed by four Cornish boilers (which weigh upwards of 50 tons), while the pumps—20 in. in diameter—are capable of raising to surface 1600 gallons of water per minute, supposing the engine to go at maximum speed. At present, however, as I ascertain later on, the present inflow of water in the depth of winter barely exceeds 500 gallons per minute, though the mine is already drained to the bottom—55 fms. below the adit, or 66 fms. from the surface—so that about two-thirds of the engine-power still remains for future and deeper working; in other words, it will be possible to sink the shaft to a depth of some 160 or 180 fathoms, and keep it "forked" without any additional engine-power.

Moving into the upper chamber of the engine-house the same perfect state of cleanliness meets one's eye all round; and, after going up another flight of steps, and opening a door, I find myself in the open air, upon one of the two platforms between which the 35-ton bob is almost silently moving up and down, at a speed of about five strokes per minute. A glance around shows one at once how thoroughly well the work of laying out the mine has been planned and carried out, and how compact and convenient everything will be when completed. Difficult it is indeed to imagine that a short 18 months ago not a stone of the building within which one stands, or of the many surrounding edifices, was laid. This one fact bespeaks in itself the energy which has been put forward by the management up to this time, and testifies to the industry and zeal of those who have had the immediate supervision of the work. Especially, one soon finds, is credit due to Mr. W. Derry, the resident mining engineer and purser, who has joined me while I have been looking round, and who has, from the first, personally superintended the laying of almost every stone one upon the other.

But, while I have been standing here, and in less time than it takes to pen these words, the thought has struck me as to how wonderfully suited is this spot for the purposes of the exploration, if there be any logic at all in regard to such matters. Of course, we may take it that tin veins have been formed by great upheavals on the part of Nature, rending the earth asunder; and, in the fissures made, deposits of metal have been left through the action of

fire, or electricity, or water, or by all combined, perhaps. And it is also a known fact that just as a spring, bubbling up in the centre of a pond, throws a gradually enlarging wave away from it, so it is with regard to lodes of tin. The centre of the upheaval is mostly denoted by a hill of varying height, round the foot of which the metal is found to be deposited in a certain direction, and the nearer the mine to the hill the larger and stronger are the courses of tin; while, as the "wave" grows larger, so the courses become thinner, more "bunchy," and, consequently, less productive. Carn Brea Hill, with its surrounding mines of Carn Brea and East Pool on the one side, and the Bassett's on the other, is an example of this; the first-named mines, nestling at its very foot, being marvellously rich; while, as the wave has extended, lodes become less and less productive, until they become "bunchy" and uncertain, as at Killifreth and other mines. So with regard to the mine of which I am at present writing.

Without a doubt St. Michael's Mount marks the centre of a violent upheaval of Nature—perhaps, scores of centuries ago; and following up the same arguments, the mines which are nearer to that centre should be those that are the most productive and most remunerative. Without doubt then Owen Vean and Tregurtha Downs should be full of riches, even on this reasoning alone. But, taking the history of the mine into consideration, the nature of the ground, and the causes for which it was previously stopped, one cannot but come to the conclusion that the present company will not only reap a rich reward for their speculation; and will further have the satisfaction of knowing that, by-and-bye the demand for labour will be increased in the neighbourhood, and thus better times will come to all. My reader (if I get a reader) will naturally have asked before this,—if all this be so, why have not former speculators reaped the fortunes which you now predict? Why is the neighbourhood covered with piles of undisturbed excavation? Why are there so many dilapidated engine-houses to be seen all round, as you have mentioned in the earlier part of this article? Listen to me for a few moments, and I will endeavour to explain why Wheal Virgin, Gwallon, Wheal Fortune, and other mines were stopped, and why it is more than probable that the Marazion district will become a rich tin-bearing one below the shallow copper deposits.

Fifty and odd years ago the old Tregurtha Downs engine ceased work. The price of black tin was then but little over 30/- per ton, and it would appear—from the vast quantity of tinstuff left in the backs of the various levels driven from the engine-shaft on the south lode (I am speaking now of this particular mine)—that the pursuit of copper ore was the chief business of the old miners on this particular lode. This is confirmed by an examination of the old workings, which disclose that rich bunches of this mineral have been extracted in places, leaving many thousands of tons of rich tinstuff to be stowed away, which is now equal in value to the average produce from the richest mines in the county—producing about 55 lbs. to the ton. And, basing an opinion upon the general rule which is found to prevail in the county, it is only fair to assume that the lode will increase in productiveness as it goes deeper.

Again; about 40 fms. northward from the working to which I have just referred (and I might here mention that the statement as to the mine being originally worked only for copper has since been corroborated by an aged miner who worked here up to the time of the stoppage), and in a parallel line east and west, runs a large, partially decomposed, stanniferous elvan course, on both sides of which are separate, distinct, and productive lodes, the northern—according to old plans and records which were shown to me—being the premier lode of the property. From one section which I examined closely (through the kindness of Mr. Derry) I found that nearly every particle of that lode appears to have been stowed away for over 100 fms. in length, down to the very bottom of the deepest level, and the agents report that a great course of tin for that length, and having a westerly dip, undoubtedly exists on this lode, and follows down a cross-course which intersects the whole of the lodes at nearly right angles, thus augmenting their productiveness. Shafts and cross-cuts are being sunk and driven for extensively working this lode, both westward and in depth, as soon as the stamps and dressing-floors are ready.

And now for word or two more as to the present and future machinery and appliances of the mine. The pumping-engine I have described, and I ought to add that since the commencement of work an adit level two miles and more in length has been cleared to carry off the surface water. One of Loam's worm-capstans, with a steel wire-rope, is employed for raising and lowering pitwork and material for underground purposes, by means of a lofty shears, gorgeous in its coating of red paint. The winding machinery consists of a pair of horizontal engines connected with two double skip-roads, conveniently situated for operating on the mineral lodes in the property. With a view to the treatment of a maximum quantity of tinstuff at a minimum of cost, the directors (of whom Mr. W. Molesworth St. Aubyn, M.P. for Helston, is the worthy Chairman), at the recommendation of their managers and engineers, after a most searching investigation by the latter, and careful comparison of the duty of these with that of the old gravitation kind, have ordered four of Husband's patent pneumatic stamps, which are being manufactured by Messrs. Harvey and Co., of Hayle, who are also making an entirely new engine to drive them. The buildings for these are very nearly completed. It is estimated that this plant will stamp at least 50 tons of tinstone per day, and it is further intended to erect a similar battery as soon as these are in full play. The ground and extensive dressing-floors are being laid out with this in view, while a spacious reservoir, to the east of the engine-house, will afford an ample supply of water for keeping operations going should the pumping-engine at any time be accidentally stopped. At present only a moderate quantity of tin is being raised, on the score of a future advantage, because stamping machinery is needed, and what is now raised has to be taken three miles to a small water-stamps. However, in a couple of months' time the men, women, and boys now working on the mine will be increased from 80 to something like double that number, and I have little doubt but that in a short time, taking into consideration the cheapness with which the stuff can be at present raised, Owen Vean and Tregurtha Downs will figure prominently in the list of dividend-paying mines of the county.

There is little more to add to what has been said; and the main portion of which was roughly jotted down on the spot and hastily threaded together since. It may be added, however, that the length of the company's grant (in the lands of Messrs. Polwhele, Trevallyan, and others) is upwards of a mile on the course of the lodes from east to west, and is of sufficient breadth to embrace other lodes besides those which I have mentioned. Westward the property is bounded by Wheal Virgin (reported to be full of riches in the shape of tin, and which I trust to see also at work ere long) and other well-known mines, which are under grant to Mr. H. R. Lewis, of London (the manager of the mine of which I have written), and Mr. Derry. The company's engineers are Messrs. Loam and Co., of Liskeard.

One more word and I have done. It is evident to the most casual observer that the present company has carried out the work, so far, thoroughly well; and that they intend the mine to be a permanency—indeed, it is difficult to see where failure can take place; that work has also been done expeditiously, and, therefore, economically, for returns will, almost at once, begin to be made, thus causing an immediate money return to defray working expenses and cost of sinking and driving, instead of the too frequent plan of wasting away original capital to the last penny before an attempt is made to try what a mine is really worth. I shall now watch the mine personally, with the greatest interest and with a confident expectation of that future success which I venture to predict.

It only remains for me now to thank Mr. Derry and his agents for their very great kindness during my pleasant couple of hours' chat and inspection of the mine, the only return for which that I can make is in thus sending forth to the public a very crude, but I believe true, description of the new mine of Owen Vean and Tregurtha Downs.

VIATOR.

ANDERTON TIN MINE.—The discovery at Anderton Tin Mine is one of those valuable and important discoveries in mining required in these dull days of mining enterprise to infuse new life and energy into honest and honourably conducted mining. The report in another

part of the Journal to-day is, we are informed, very much within the truth; very much better things are almost certain to follow the discovery of a large and rich tin lode, in addition to those features which were before this rich enough to induce the adventurers to erect fine machinery and make large outlays in development.

#### REPORT FROM CORNWALL.

*Jan. 24.*—It is not easy to exaggerate the state of feeling which prevails in the heart of the Western mining district. It is not simply that there is depression—though, so far as we can see, rarely has depression been so manifest in its results, and no little disposition to make the best that can occasionally be made even out of depressed times. Associated with the depression is a feeling of dissatisfaction—we might fairly say indignation—at the extent to which the present state of things might have been prevented by truly liberal and kindly consideration. We said when the Dolcoath fine was levied that an amount of injury had been done to mining in general which it was impossible to reckon, and which it would take months, if not years, to recover from. Unfortunately this forecast has proved only too true, and at the present moment there is no greater obstacle to the restoration of confidence. The fact is patent to everyone, and it is of no use attempting to disguise it. In any case improvement, therefore, will be a work of time. Under ordinary conditions of depression we might expect that investors would be taking advantage of the miserably low prices at which mines with really good prospects are selling; but the want of confidence prevents this. It has been suggested that mine adventurers generally should make common cause upon the dues question, and point out to the lords that the dues must be relinquished when calls are being made and wages reduced to the lowest point. We do not know what prospect there is of general discontent taking the shape of united action, but some decided step is needed.

Carrying out in one form the idea of more work for the current wages, has led to the consideration as another means of practically attaining the same end, by the extension of the tribute system, which in many mines has certainly been unwise curtailed. There is, we believe, a strong disposition in some influential quarters to have wide resort to this as one method of meeting the existing pressure; and it certainly has this advantage, that not only is it certain in its application, but it is easily applied. Somehow or other calls will have to be reduced to a minimum, and so far as the actual working of the mines is concerned there is every prospect of steady and efficient co-operation to that end. We hope it will be so in the other quarters concerned.

At length we may congratulate ourselves on the fact that Dolcoath has a perfectly clean bill of legal health, and has seen the end of her Mayne troubles. At a special meeting held on Monday Mr. Rogers's bill was settled on the basis of a compromise arranged by Mr. Marrack, without taxation—a costly and lengthy process—Messrs. Rogers receiving 550 guineas in addition to the 250/- already paid, in lieu of all demands. The only objection, it was stated, raised by Mr. Marrack had no reference to Mr. Rogers's own charges, but to the fees of counsel. These were 250/-, and it was recommended should be reduced to 100 guineas. It will now, however, be for Mr. Rogers to make the best arrangements he can with the learned gentlemen. Let us hope that Dolcoath has seen the last for many a year of her lately abounding difficulties.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

*Jan. 24.*—The South Staffordshire Coal Trade remains in an unsatisfactory state. House fuel is very flat for the time of the year, and merchants show no inclination to lay in stocks. Furnace coal sells well in the limited area over which best qualities are mined, and good prices are being got for it. But mill and forge coal is in less demand than at date of last report, and the colliers are working short time. Prices for furnace and second-class house coal range from 9s. to 10s., for best mill coal 7s. 6d. to 8s., and for forge from 6s. 6d. to 6s. Best rough slack on the Dudley side of the district is 4s. to 5s. Staffordshire pigs remain tame at 6s. 6d. to 60s. for all-mines. Hematites are 57s. 6d. to 60s., but there are very few sales. Cleveland foundry pigs were quoted to-day in Birmingham at 49s. 6d. per ton delivered, but there were no buyers. The mills and forges are only partially employed except as to best sheets. These latter keep at 10/- to 11/- for working up purposes. Boiler-plates, 8s. 10s.; best bars, 7s. 10s. to 7s. 11s.; common sorts, 6s.

The colliers employed at Old Hill by Messrs. Swindell and Collis have after a fortnight's strike against the introduction of certain new rules resumed work this week. The firm have agreed to withdraw the new rules, and abide by those which have until lately been in force.

The first of the series of 20 lectures "On the Theory and Practice of Coal Mining and Colliery Management" was delivered at Mason College, Birmingham, on Monday, by Prof. John Brown, C.E., F.G.S. There was a fair attendance of mining students, to whom the lectures will prove very valuable. The lecturer gave an outline of the course he proposed to follow in his subsequent lectures, and referred briefly to the various items in the syllabus.

On Wednesday an inquest was held at Dudley upon the body of George Colwell, aged 21, a miner who had died from injuries received in the Warren Hall Colliery, Rowley, of the Earl of Dudley, on Nov. 26 last. It was shown that deceased and other miners were going to get some coals down, and deceased knocked upon the face to see if it was safe. But there came a "bump," and the coal fell upon the deceased. He blamed no one. Mr. Pickering, Assistant Government Inspector of Mines, explained that deceased being one of the "doggies" in the pit it was part of his duties to examine the face of coal. A verdict of "Accidental Death" was returned.

In North Staffordshire the Coal Trade, whether for manufacturing or domestic purposes, is tame, and during the past two or three weeks the consumption has been lighter than for some time previous. Although the output has been reduced the production continues more than equal to the requirements of the market now prices tend downwards, although nominally they are unaltered. Ironstone is selling readily, good contracts having been lately entered into, and at prices which are fairly remunerative. Some pig makers have recently booked big orders, mostly for part-mine sorts, and the demand may be characterised upon the whole as a little better. Mine pigs are selling at from 60s. to 55s., and common sorts at from 42s. 6d. to 40s. The manufactured iron trade is in an irregular condition, and orders cannot be reported satisfactory, whether extent or price is considered. Ordinary bars are 6s. 2s. 6d. to 6s. 10s., and best descriptions 10s. more.

#### TRADE IN SOUTH WALES.

*Jan. 24.*—The amount of steam coal shipped at Cardiff last week was the greatest on record in the history of the port, being 163,195 tons foreign, and 21,883 coastwise; Newport sent away 36,506 tons foreign, and 19,142 coastwise; Swansea, 19,313 tons foreign. The house coal trade is very good considering the mildness of the weather. Cardiff sent away last week 4617 tons patent fuel, and Swansea 2655 tons. It is a source of no inconsiderable gratification to be able to announce that the general condition and aspect of the vast coal industry in the Rhondda Valley is at the commencement of the year 1884 in a healthy state as it can well be. The coal trade throughout the valleys during the past year has been exceptionally gratifying and although there have been no sudden leaps and bounds from depression to great prosperity, work has been regular and plentiful, and in consequence of the several advances made during the year by the sliding-scale arrangement, the colliers' wage rate is now a considerable improvement upon that which was paid during the preceding years. Several new collieries have been started, old concerns reopened, and the hopeful outlook of the trade has been such that there has been no lack of enterprise, and no danger that colliery proprietors will be "blinded with the lustre of gold, rushing into Barry pitfalls and morasses." At the Blaenrhondda and Fernhill Collieries, considerable animation prevails, and excepting the couple of days lost during the Christmas holidays, and a couple of days a month before, when the last advance

was declared by the General Association sliding-scale, there has been no loss time owing to any scarcity of orders for a considerable time past. The Dunraven and the Rhondda Merthyr Collieries, which are situated in the neighbourhood of Blaenavon, also show the same signs of activity, and at both the last-named concerns their prospects for the future are bright and encouraging. Coming down to the neighbourhood of Treherbert, the Lady Margaret and Old Butte Collieries are in full swing, the quantity of coal produced there being at the present time very large. The same cheerful remark will apply to the Ynysfelin Colliery, situated at the same place. In the neighbourhood of Treorky, where the Ynyswen, Abergorky, and Tylacoch Collieries are situated, matters are in a very healthy condition. The workings at the Ynyswen Colliery are being opened out with considerable energy, and its newly-acquired proprietor, Mr. W. Jones, of Cefn, deserves a word of commendation for the manner in which he has carried on the concern after the disastrous explosion which occurred, when Mr. S. W. Kelly, the then proprietor, met with his sad death. The Abergorky Collieries also show considerable signs of animation, and the new vein of coal struck at the level some time ago is proving to be of excellent quality. There has been considerable immunity from serious accidents at these large collieries for some time past. At the Tylacoch Colliery a short time was lost lately in consequence of the Christmas holidays, and when work was resumed an accident occurred to the winding engine, which necessitated a cessation of work for a couple of days more. However, since the engine has been repaired operations have proceeded without a hitch, and the colliery, as it is generally known here, is being rapidly improved and opened out by its energetic new owners, Messrs. Thomas and Evans. Going over to Cwmpark, where two of the largest collieries belonging to the Ocean Coal Company are situated, full time is the order of the day. The "black diamond" is produced in enormous quantities. The new pit above Cwmpark is going on as well as can be expected, and it is believed that ere many months have passed a considerable quantity of coal will be brought to bank there. Going down to the Tynebedw and Gelli Collieries in the neighbourhood of Pentre, both of which collieries were lately the property of Messrs. Thomas and Griffiths, have just been acquired by the Messrs. Cory, of Cardiff, considerable animation is observable, and a bright future is predicted, inasmuch as the resources of both collieries are capable of considerable improvement and enlargement. The Pentre and Church Collieries are just now in full employment, and the same encouraging words will apply to the Bodringallt, Ton and Bwlifla Collieries.

The Steel and Iron Trades of the district exhibit no signs of improvement. Newport sent away last week a parcel of 1330 tons to Cape Town, 750 to Bahia, and 157 to Dieppe. Iron ore has been received at Newport to the extent of 12,330 tons, and 1650 from other places; Cardiff received 9848 tons from Bilbao, and 2491 from other places. Prices remain low.

The Tin-Plate Trade is a little better as regards prices. Good IC cokes are quoted at from 15s. 6d. to 15s. 9d. per box, and best char-coals at from 18s. to 19s. The works open are all in active operation.

#### WATSON BROTHERS, MINE OWNERS, STOCK AND SHARE DEALERS, &c 1, ST MICHAEL'S ALLEY, CORNHILL, LONDON

The subject of lords' dues, to which our attention was called last week, is assuming vast importance, and it is quite clear unless a general reduction takes place, to say nothing of remissions of arrears, the geese that for lords, at least, have so long laid golden eggs, will be destroyed. We may also add that in these days of depression and the difficulty of getting in calls the merchants also must not only charge as little as possible, but give more time, as a rule, for payments.

In Cornwall it is pleasant to see that many lords are assisting the lessees of mines under them, not only in reducing the dues for the future, but in total remissions of arrears, and in this way the name of Lord Robartes stands out conspicuous. This is as it should be, for shareholders without such consideration is shown them, cannot be expected to keep putting their hands in their pockets to work mines that only benefit lords and merchants. And here it should not be lost sight of that if these old mines that do not pay to work at the present price of metals—once stop working, the royalties they now pay will not only cease, but there will be little chance of their ever being worked again.

Thus it is to the interest of the lords themselves to be generous and liberal in such times as these. We have heard of cases of peculiar hardship, where lessees and those working under them have been and are treated with great severity; but they are rare, and happen mostly we suspect when the lords themselves, if appealed to personally might act differently. Certainly they would if they looked to their own interest. The subject altogether is one well worth ventilating, and we shall be glad to receive communications from correspondents upon it in a general way.

The district in which East Blue Hills is situated made large profits before the discovery of West Kitty. Thus from an old plan we find that Blue Hills—close up to the boundary of East Blue Hills—made 37,000*l.* profit; Penhalls, 35,000*l.*; Polberro, 30,000*l.*; Wheal Friendly, 16,000*l.*; Wheal Kitty, 50,000*l.* It is on the Penhalls and Blue Hills lode that we have been working so far at East Blue Hills, and selling tin (without machinery) from the commencement. At first we stamped our tin at some borrowed stamps; then we erected 20 heads, and have sold altogether 27,98*l.* worth. We have also done a deal of dead work, particularly in clearing and making a shaft down to the 30, with a view to getting under the workings from which we raised the above-named tin, and are still raising fair quantities. Our expenditure on this, including whims, stamps, &c., has been 27,000*l.* All this has been on the old lode. We have also cleared Gompas's adit for a long distance towards the West Kitty lode, and may some day cut it at a good depth. And because we have been asked so many times about this lode we requested the purser to have it surveyed and dialled, and the general result we gave last week. We have since received a plan of the district, showing the run of the West Kitty lode into and through the southern part of East Blue Hills, and as the lode underlies 6*f.* in a fathom, the deeper we go the more it will be East Blue Hills sett. The size of the latter is many times larger than West Kitty, and few young mines have done better, for we have, as shown, sold tin to the value of 27,98*l.*, have done and shall do without any call since the commencement, and should have made a good profit but for the failure of the water for the stamps during the summer months, and the sinking of the shaft, which was considered prudent and necessary to get under the present deposits of tin, which have from first to last been very productive. Large quantities were taken away above the 30 before the present company took the mine to work down to the 50, or deep adit. The plan of the district referred to, and sent up by the purser, may be seen by any shareholder here or at the offices of the company; also a sketch showing the extent of the ground taken away.

We know of no reason for the fall in Crebor shares beyond the price of copper, and the general dullness of the market. Writing to the offices of the company under date of the 18th inst., the purser says: "We shall sample next week somewhat over 400 tons, and we expect it will be little better quality than the last. In talking with the agent to-day and reviewing the past year, we consider our position underground is better than it was this day twelve months; the discovery of ore in the bottom of the mine to west of new shaft is a most important thing for us, as it looks quite like making a long course of ore."

The 102 west at Prince of Wales is worth 2 tons of copper ore per fathom, and 8*d.* per fathom for tin; the 90 west 1*½* ton of copper and 8*d.* per fathom for tin. The extra stamps went to work on Monday.

The lode in the 122 east at Polrose is 3*f.* wide, composed of peat, sand, and a little mud, with tin disseminated throughout it; it is, the agent says, a very compact lode, with two regular walls, and looks promising for an early improvement.

Business continues to be very quiet on the Stock Exchange, but

markets generally are steady and prices show no great changes. In the foreign market Egyptians are firmer, the dispatch of General Gordon having a re-assuring effect. Peruvians are dull and lower on the prospect of further litigation restricting the distribution of the funds now in hand; the Five per Cent. Loan is only about 8*½*. Spanish stocks have been in demand at higher figures. The dividends already announced on some of the English railways are satisfactory, and, with the exception of that of the Great Eastern, up to general expectation; the Great Eastern was very disappointing, being at the rate of only 2*½* per cent. per annum, compared with 3*½* per cent. for the corresponding period of last year, giving 1*½* per cent. for the whole year, against 2 per cent. in 1882. The company is about to issue a large amount of new capital. Grand Trunk and Mexican Railway stocks are better, the traffic returns showing smaller decrease than expected. Anglo-American Telegraph stocks and British Electric Light shares are lower. The English Funds steady.

**GOLD COAST MINING COMPANY.**—The following is a copy of a letter received from Mr. Haughton, the engineer who was sent out by the directors of the Gold Coast Mining Company (Limited) to report on their property. It will be followed by a full report, and it may be added, that the letter which appeared from Mr. Gowans some time ago on the general prospects and condition of the mine has been handed to Mr. Haughton, who has been instructed to go through it in detail, on behalf of the shareholders, and report upon it:—

Abbontyakoon, West Coast Africa, Dec. 18: For the information of the board of directors, I advise you of my arrival at Axim on the 5th—all safe. Mr. Gowans' gig arrived on the 11th to convey me to Inframangy, at which place I arrived on the 12th, and was met by Mr. Gowans. We remained at the latter place the following day, looking round, and left for Bonash on the 14th, arriving here on the 15th (Sunday). I may state that I am very favourably impressed with the mine, what little I have seen of it so far, and that Mr. Gowans is deserving of great credit for what he has accomplished, not only for the manner in which he has developed the mine, but also for the erection of the machinery in the face of the great difficulties he has had to contend with by overland transportation, and the want of practical mechanical labour. I am astonished that he has succeeded in accomplishing so much without the aid of a single mechanist that ever saw a quartz crushing battery until he went out there; and even now it necessitates him being continually at the mill, for, if anything goes wrong, he has no one with him that knows anything about it. In all probability you will receive my cable before this. I am sorry to say that I have a slight attack of fever to-day, but I hope to get rid of it quickly, so as to be able to get through the mine and report by cable next steamer.—T. J. HAUGHTON.

Since receipt of the above a telegram has been received from Mr. Haughton, sent after his fuller examination of the mine. It states that the property is very valuable, and may, with a small additional outlay to improve the machinery, with which Mr. Haughton is not quite satisfied, be made to pay well. Mr. Haughton's detailed report will appear in due course.

**GOLD MINING IN BRAZIL—IMPORTANT TO INVESTORS.**—We understand that in the course of the next few days a new company of unusual promise will be introduced to the public, which is very influentially supported in both London and Paris. It has been formed to work a group of four mines in one of the richest districts of Brazil, the great value of which has already been proved by explorations extending over three years. The mines are stated to be in full working order, with large ore reserves. A strong board has been formed, and the names of the London managers, when announced, will be certain to inspire confidence in all those acquainted with the numerous mines which they have conducted to a successful issue.

**POTOSI GOLD.**—In an explanatory circular issued with the notice of the forthcoming meeting for reconstruction of the concern it is stated that in the old company the capital is—Ordinary shares, 349,000, at 1*l.* each, 349,000*l.*; founders' shares, 1000, representing nominally 1000*l.* (these will, owing to this reconstruction, be extinguished); first mortgage debentures, 50,000*l.*; second mortgage debentures 20,000*l.*; third mortgage, 1425*l.* = 421,425*l.* The new company, capital of 300,000 shares of 1*l.* each, will consist of 70,000*l.* 10 per cent. preference shares, fully-paid, and 230,000*l.* ordinary shares, to be apportioned thus—50,000 10 per cent. preference shares, in lieu of first mortgage debentures, with option of conversion into ordinary shares, 50,000*l.*; 30,000 ordinary shares, fully paid-up, to be given as bonus for first mortgage debentures, 30,000*l.*; 20,000 10 per cent. preference shares, in lieu of second mortgage debentures, with option of conversion into ordinary shares, 20,000*l.*; 20,000 ordinary shares, fully paid-up, in payment of 1425*l.* third mortgage and 25,000*l.* open loan, 20,000*l.* = 120,000*l.* Then 87,250 ordinary shares, fully paid-up, and 87,250 ordinary shares, with 10*s.* paid, representing 130,875*l.*, will be given in exchange for shares of the old company, by the allotment of one new share of 1*l.*, fully-paid, together with one new share with 10*s.* credited, for every four 1*l.* shares of the old company. The 10*s.* per share to be payable, 2*s.* on allotment, and by 1*s.* calls as required, giving an available working capital of 43,625*l.* The balance of 5500 shares is to be held in reserve.

**THE ORGANOS GOLD MINES (Limited).**—As will be seen by the report in another column, the last month's return of the mine showed a profit of \$1071, or 214*l.*, this being at the rate of about 10 per cent. per annum upon the capital of the company. The mine is opening well, and in private letters which have been received it is stated that the Socorro lode "is looking exceedingly promising, and as far as it is in anyone's power to judge there is a fine mine here." "We are good for 10,000*l.* a-year at least. It has paid double what has been spent upon it from the first, and will do better." The total returns of the mine so far have been 1432 tons of quartz, producing 802 ozs. of gold, or an average of 11*½* dwt. per ton. Such a rate as this it is understood will pay a gold mine exceedingly well, but in this case it should be remembered that a large quantity of the quartz has been taken from a part of the mine which had broken in, and was consequently much poorer than would otherwise be the case. In ordinary working the returns show that an average of over an ounce per ton may be looked for.

From Mr. JOHN B. REYNOLDS:—Complaints are very general in all trades that great quietude prevails. Every branch of business shows an absence of animation, and probably the tin market is favourable in comparison with other markets. That more is said about the depression here is natural, owing to the large number of shareholders throughout the country who are interested in our tin mines. What we may look for is a steady improvement in business generally, and we shall all be the safer if we keep clear of the opinions of various interested individuals, and confine ourselves strictly to the facts as they come to time to present themselves. It cannot be too strongly urged that seasons of depression are periodical, and that, as surely as they come, they will pass away. It is most encouraging to notice the prospects of some of our leading mines. Dolcoath never looked richer than it does at present, and, consequently, it was never so well able to bear a comparatively low price for its produce. We should suppose that within the last four months the intrinsic worth of West Kitty must have well-nigh doubled.

At West Polreath there is an important improvement in the 40*f.* level, or so it is rumoured, and most likely before this is in print the official notification of it will have reached the office. Carn Brea is looked upon as a good speculation, and a high appreciation is expressed of the manner in which the shareholders acted at their last meeting. No sympathy whatever is felt with those who denounce the managers for what in the past we consider to have been a mistaken policy. The fault is not so much with the managers as with the shareholders themselves for not having provided the managers with sufficient funds to carry on the business legitimately. The managers of our leading mines never stood so high as they do at the present moment, yet unfortunately the same cannot be said of one or two other officials. It is, however, only fair to remember that in depressed times it is the rule for officials to go down in public estimation, and errors of judgment are greatly magnified.

**SCOTCH PIG-IRON.**—Mr. E. W. Crawley, warrant broker, of Leeds, has just issued the second annual edition of his Scotch Pig-Iron statistics for the past 31 years. The tables are neatly arranged in a little volume 5*in.* by 2*½* *in.*, and will be of great utility to speculators in iron warrants.

**GOLD AND SILVER.**—Messrs. PIXLEY and ABELL (Jan. 24) write:—Further withdrawals of gold from the Bank have taken place, the arrivals having been very small, and quite inadequate to supply the orders which have been received. The total taken out is 250,000*l.*, and consists chiefly of bars, for Spain. We have received 46,500*l.* from Australia. Silver declined to 50*d.* per day or two after our last, but as the Indian Exchanges approved, and a better demand for money in the East, as experienced, a recovery to the former rate of 50*d.* took place, and at this quotation the market may be considered firm. The City of Chester has brought 40,000*l.* from New York, and the Cotopaxi 25,270*l.* from Chile. The P. and O. steamer does not leave until Saturday, so we are, therefore, unable to state the amount of silver going to India by it. The quotations for bullion are—Bar gold, fine, 7*s.* 9*d.* per ounce standard bar gold, containing 20 dwts. silver, 7*s.* 10*d.*; Spanish doushous, 7*s.* 9*d.* to 7*s.* 10*d.*; South American doushous, 7*s.* 8*d.*; United States gold coin, 7*s.* 3*d.*; bar silver, fine, 60*d.*; firm; bar silver, containing 5 grs. gold, 55*d.*; case silver, 54*d.*; Mexican dollars, 49*d.*; quicksilver, 5*s.* 8*d.* Discount 2*½* per cent.

#### FOREIGN MINES.

**ALAMILLOS.**—Jan. 16: The lode in the 55, driving west of San Felipe's shaft, is 3*f.* wide, but is without lead. In the 50, driving in the same direction, the lode produces good stones of lead ore. The lode in the 55, driving east of San Enrique's shaft, has improved in appearance. In the 130, driving east of Taylor's engine-shaft, the lode is somewhat easier for working and contains spots of lead. The lode in the 130, driving west of Taylor's engine-shaft, is unproductive. In the 115, driving west of Taylor's engine-shaft, the lode becomes poor in the past week. The lode in the 80, driving east of San Victor's shaft, is less productive than it was when last reported; its present value being 1*½* ton per fathom. The lode in the 70, driving west of San Victor's shaft, the lode is wider but contains no lead. The lode in the 70, driving west of Judd's shaft is small and unproductive. In Rosas winze, sinking below the 40, the lode has declined in value to 1 ton per fathom. In Cantero's winze, sinking below the 50, stones of lead are found in the lode. Serafin's winze, sinking below the 50, is being sunk east of Judd's shaft, its present worth is 1*½* ton of ore per fathom.

**ALMADA AND TIRITO CONSOLIDATED SILVER.**—Richard Harris, Dec. 22

Mons Grande Hundred Lode: In the stopes in back of the 40*f.* drift 10*f.* wide, were stopped at \$5 per foot. The pay streak is 2*f.* wide, producing 8 tons per linear fathom. The stopes in back of No. 45 drift is more dredge than when last reported on. The pay streak is 2*f.* wide, yielding 8 tons per linear fathom. The stopes in back of the 12*f.* drift, level is yielding 16 tons per linear fathom; the pay streak is 4*f.* wide. In No. 3 winze, below No. 45 drift, 6*f.* wide, were sunk at \$12 per foot. The bottom is 3*f.* in ore, and yielding 12 tons per fathom. No. 1 winze, below the 12, was sunk 5*f.* wide, at \$15 per foot; the bottom shows 3*f.* of ore, yielding 12 tons per fathom. No. 2 winze, below the 12, was sunk 8*f.* wide; the pay streak in the bottom is 2*f.* wide, yielding 8 tons per fathom. In the 12 we have now an ore level of 140*f.*; the north breast shows 6*f.* of solid ore, and presents a finer appearance than anything we have yet seen since the discovery of this lode; this end is now yielding 24 tons of good milling ore per cubic fathom; the driving age during the fortnight was 12*f.*, at \$11 per ft. In sinking the winze in San Jose we struck old workings, and after removing the debris we encountered two winzes almost vertical; by this discovery we have gained about 5*f.* in depth, or the equivalent of ten weeks' working. We expect to communicate with San Juan workings in a few days. This communication will be of great importance for ventilating the Mina Grande and exploring for pillars upwards. W. A. Clemens Assay from Dec. 11 to Dec. 22: The general ores from the Hundred lode have assayed 31.5, 32.2, 40.3, 46.7, and 42.3 ozs. per American ton. Samples from the stopes below Guizas drift and from rise in back of same, 26.3 ozs. per American ton. Green ore from bottom winze in San Jose, 11.7 ozs. per American ton.

**CALIFORNIA GOLD.**—Mr. Alfred Rickard, Dec. 22

100*f.*; the drift has entered disordered ground, consisting chiefly of loose porphyry, and it will be necessary to open out on the footwall of the lode in order to ascertain the course of the pay. The stopes of this level continue to yield 5 tons of ore per fathom. The 1500 west is in 85*f.*; the lode carries 2*½* ft. of fair grade milling ore, valued at 6 tons per fathom. The stopes of this level are in pay of the same nature as the drift. The 1400 east is in 380*f.* and has been suspended. From the stopes of this level an output of about 3 tons of milling ore and 1*½* ton of smelting ore per fathom is being obtained. The 1400 west is in 320*f.*; the lode in the stopes is 1*½* ft. wide, yielding fair grade mineral. The 1300 winze west is down 26*f.*, and is being opened out fairly good stoping ground. The 500 cross-cut is in 21*f.*.

Mr. Rickard telegraphed the directors on the 24th inst., as follows:—Mill run, 500 tons; yield, \$5500 (110%).

**COLORADO UNITED.**—Mr. Macrae, Jan. 5: The 13th level is now carrying a nice-looking crevaceous rock, and about 3*f.* of ore in the bottom of the drift; for the past 3 or 4*f.* there has been but little mineral in the breast of the drift, but there is a new spicule of ore coming in 1 to 1*½* in. width, and of good-looking quality. We are now stoping west from No. 3 winze and have had to go through some barren ground before reaching the mineral. Next week we shall start to stop on this ore, and will doubtless ship more cobbled ore than we have this week, as the streak is now beginning to come in. The work in the lower workings of the Fenton have a nice streak going both east and west, and have this week shipped 117 sacks of ore, of which 35 sacks are 1st class, 65 sacks 2nd class, and the balance screenings. The rest of the tributaries' pitches are looking about the same. The mill was started on Monday last, but it has not been running well. The water is scarce for the screens and jigs, and will consequently not jig the mineral properly, as the water is not sufficient to carry off the poor rock. Ore shipments for the past week are as follows:—49 sacks cobble ore, weighing 2 tons

works are kept on steadily, and the machinery is in good working order. We estimate the raisings for January at 75 tons. The tributaries returned in the past month 36 tons of ore.

**HOOVER HILL GOLD.**—Jan. 4: In the Gallimore shaft which is down 30 ft. below the 170, an advance of only 7 ft. has been made during the month. The vein in the bottom is much flatter than heretofore, and considerable time was spent during the first part of the month in cutting down on the hanging-wall side. The vein in the bottom looks well. The 170 north is in 31 ft., an advance of 9 ft. for the month; driving by six men at \$18 per foot. The vein in this drift at one time during the month showed an improvement, but is again pinched and split up. The 170 south is in 60 ft. The men have been put to sink winze which is down 9 ft., by six men at \$22 per ft. In the tunnel stops the south end has become poor, and a drift is being run to see how far in that direction the ore extends. Driving south from the cross-cut, west of Hawkins' shaft at 135, under the tunnel ore body, favourable ground has been encountered carrying quartz strings, which show a few colours in the pan. The drift is in 49 ft., showing an advance of 16 ft. for the month. Driving by two men, at \$3.50 per foot. It will be continued a short distance further, after which the men will be put to follow these indications. The 70 cross-cut, east of Hawkins' shaft, is in 10½ ft., an advance of 80 ft. for the month; by four men at \$15 per foot. Two veins have been cut in this cross-cut, as I duly informed you. Having driven a considerable distance beyond the second one without meeting any favourable indications the cross-cut will be stopped, and we have started to drive north on the second vein. Set to two men at \$140 per foot. In the open cut to the east of Hawkins' shaft, as near as may be over where we cut the two veins at 70 ft., we are clearing out some old works, and are taking out a good deal of stuff which, although of low produce, will pay to mill. In the Hawkins' open-cut a drift is being run to the south, in which we have encountered a little low grade ore. The Old Brio's shaft has been set to four men to cut down and timber to the 70, at \$3 per foot.—Mill: 479 tons were milled during December, yielding 186.75 ozs. of gold, or at the rate of about 73 dwt. per ton. There was a delay of three and a half days during the month, three of which were at Christmas.

**INDIAN CONSOLIDATED GOLD.**—C. B. Longbottom, Dec. 31: Indian Phoenix Gold Mines, No. 2 crushing: Grove section: Crushing commenced Oct. 23 and closed Dec. 22; total number of working days 53, or 1272 hours; number of hours idle, 687½ hours; crushing with two batteries of five heads each, 584½ hours; number of trucks of quartz sent to the mill, 660; ditto left in the hopper 5 = 655, or 589 tons 10 cwt. The duty per 10 stamper heads for 24 hours was 24 tons 2 cwt. 1 qr. 18 lbs., or 2 tons 8 cwt. 0 qr. 26 lbs. per head. The returns were from copper plates (amalgam 143 ozs. 18 dwt.) 49 ozs. retorted gold; two stamper boxes (amalgam 8 ozs. 10 dwt.) 3 ozs. 14 dwt. retorted gold; rifles, retorted quicksilver, 4 ozs. 10 dwt. retorted gold; Wheeler's pans (amalgam 47 ozs.) 13 ozs. retorted gold; ditto, retorted quicksilver, 2 ozs. 10 dwt. retorted gold; Tyrolean Mills (amalgam 10 ozs.) 2 ozs. 2 dwt. retorted gold; ditto, retorted quicksilver, 13 dwt. = 75 ozs. 14 dwt., less loss in milling, 1 oz. 14 dwt.; leaving weight of milled gold = 74 ozs. The yield per ton of quartz was 2 dwt. 12 grs. Pundalur: This shows an appreciable improvement over the last crushing.—Gifford section: Mullocky quartz: Crushing commenced Oct. 20 and closed Nov. 30; total number of days 35, or 884 hours; number of hours idle, 402½ hours; crushing with two batteries of five heads each, 461½ hours; number of trucks of quartz sent to the mill, 2152, or 654 tons 12 cwt.; ditto left in the hopper, 44 tons 12 cwt. = 610 tons. The duty per 10 stamper heads for 24 hours was 31 tons 14 cwt. 1 qr. 23 lbs., or 3 tons 3 cwt. 1 qr. 21 lbs. per head. The returns were from copper plates (amalgam 34 ozs. 8 dwt.) 12 ozs. 4 dwt. retorted gold; two stamper boxes (amalgam 10 oz. 10 dwt.) 3 ozs. 18 dwt. retorted gold; rifles, retorted quicksilver, 2 ozs. 4 dwt. retorted gold; Wheeler's pans (amalgam 20 ozs.) 4 ozs. 10 dwt. retorted gold; ditto, retorted quicksilver, 1 oz. 15 dwt. 1 oz. retorted gold; ditto, retorted quicksilver, 8 ozs. = 24 ozs. 16 dwt., less loss in milling, 18 dwt.; leaving weight of milled gold = 23 ozs. 18 dwt. The yield per ton of Mullocky quartz, 18½ grs.

**KAPANGA.**—James Thomas, Dec. 8: Crushing: During the late month there has been 30 tons of general quartz crushed, yielding 15 ozs., with 15 lbs. of rich specimens that produced 30 ozs. 5 dwt.; the total being 45 ozs. 5 dwt. melted gold, and giving a yield of 1 oz. 15 dwt. per ton.—No. 50's Lode, No. 1 Winze South: The two stopes north and south from the bottom of winze have been stopped to the 50 for a length of 12 ft. long, the upper section of same producing the yield this month. To further open up the ground north and south for stopping the bottom ends are being pushed forward at the new No. 1 level.—The North and South Ends: The south end has been further driven on the course of the lode 45 ft., distance from winze 60 ft., and the north end has been driven 14 ft., distance from winze 26 ft.; the lode in each end at present is poor, consisting of a black mineralised seam of tough flookan, intermixed with soft branches of decomposed quartz and carbonate of lime. I expect they may change to gold bearing quartz again at any moment. Securing 50 Level: This level has taken a pair of men the best part of the month to put it in repair. I am glad to say it is now completed with free communication and ventilation made to the Old Coromandel shaft, from where the largest quantity of surface drainage water finds its way to this level, which is kept from going to the bottom. The 70 Kapanga lode, No. 8, has been again driven south on the footwall course of the lode 25 ft., the distance attained from the intermediate cross-cut is 127 ft.; the ground becoming soft in the footwall flookan, from lodged water in the No. 7 a slip of ground came off a slippery angular head from the hanging-wall to a height of 15 ft. In securing the run it was desirable to put it through and secure it, as a rise to the No. 7 level, 22 ft. in height, which has been completed. This No. 2 rise south will be a great advantage, as a pass for stopping out the ground; as this level gets south the end is now being carried more westerly in its course to get out of the soft footwall in order to catch the hanging-wall branches, as they have always proved the most productive, having traced the shoot down from the 50 end, at present is in a stiff piece of ground which is frequently found between the foot and hanging walls. I expect to reach the hanging-wall in a few days, when any good results may be expected.—No. 7 Level: During sinking the south No. 2 winze from the Nos. 6 to 7 levels, some good specimens were obtained from the winze and stopes than come this block of ground being now laid open, I put a pair of men to stop the north of the No. 2 winze on a small branch or dropper of quartz from the hanging-wall, this branch is from 1 to 3 in. wide, occasionally producing rich small specimens intermixed with strong metallic arsenic. Such branches are known to rob the lodes of the richest deposit, and I am hoping this will lead to something good.—Machinery: The engines and pitwork are in the best of order, and the consumption of coal at its lowest during this dry summer season.

**KOHINOOR AND DONALDSON CONSOLIDATED.**—Mr. Alfred Rickard, manager at the mine, in his report, dated Dec. 31, states:—The work in the mines being restricted to tribute, and in consequence there being little room for remark in so short a space of time as a week, I have thought it quite sufficient to send in a monthly report. The stopes in the Donaldson levels, 1 and 2, and intermediate, have yielded a larger quantity of ore than for some time past, and the receipts from smelting ore are likely to be a substantial improvement on last month. The Champion cannot be expected to do better until the milling ore can be handled. The fixing of the machinery in the new mill is now well advanced. The crushers, stamps, jigs, and screens are well nigh finished. There remain the shafting, vanners, and various other items of lesser importance, to complete. The engine has been under steam and works admirably; it is of sufficient power to drive with ease not only the machinery now in place, but also when required a duplicate of the present plant, which would be equal to treating 100 tons per day.

**LAKE SUPERIOR NATIVE COPPER.**—Capt. Williams, Dec. 22: No. 1 level, south of No. 2 shaft, advanced 17 ft.; lode strong, well-defined, and carrying good walls, at present poor. No. 2 level, south of No. 2 shaft, advanced 15 feet, producing good stones of native copper. No. 2 shaft sunk 6 ft., no change to note. No. 3, north of No. 1 shaft on lode, 7 ft. 9 in., cross-cut through lode 6 ft.; lode producing a little saving work for native copper. No. 3 level, south of No. 2 shaft, advanced 4 ft. 8 in.; here the lode has undergone a change for the better, now 6 ft. wide, producing some copper glance. From its present appearance I am confident we are entering a run of native copper ground, and by the end of next week I hope to report a good lode at this point. Level at Fall's advanced 7 ft.; no change since my last. Shaft at harbour on amygdaloid belt still continues to produce good shot copper, and looks very promising indeed. On the whole the mine opens up well. Our two stopes in back of No. 1 and No. 2 levels are producing good mill work, and continue to open up well. We have completed still in back of No. 2 level, and recommend stopping. This stope is now in good working order, and we are in a position to commence another stope farther north when we require to do so. The mill has only worked two days during the past week.

**LINARES.**—Jan. 16: Pozo Ancho Mine: The 130, driving west of Warne's engine-shaft, is opening up a good length of valuable ore ground, worth 2 tons per fm. The lode in the 115, driving west of Warne's engine-shaft, is very wide, and spotted throughout with lead ore, yielding 1 ton per fm. In the 135, driving west of Peill's engine-shaft, the lode is disarranged and unproductive. The lode in the 135, driving east of Peill's engine-shaft, is small at present, yielding ½ ton per fm.; the ground is very hard. In the 135, driving south of Peill's engine-shaft, excellent progress is being made. The lode in the 120, driving east of Peill's engine-shaft, is regular and well defined, consisting of carbonate of lime and lead ore, worth 1 ton per fm. The lode in the 135, driving east of San Francisco shaft, although small is very compact and regular, producing 1 ton per fm. We have commenced sinking Peill's engine-shaft below the 135 with a select party of Spanish shaftmen, and hope to make good progress in getting down to a new level.

The 252 winze, sinking below the 65, is going down in a compact and regular lode, worth 2 tons in a fathom.—Quintinientos Mine: In the 115, driving west of Taylor's engine-shaft, the lode is large and strong, and of a promising appearance. The lode in the 115, driving east of Taylor's engine-shaft, contains a little ore, but not sufficient to value. In the 100, driving in the same direction, the lode is opening up a very fine vein of ore ground, worth 3 tons in a fathom. The lode in the 90, driving east of Taylor's engine-shaft, is very open, consisting chiefly of calcareous spar, and yielding a little ore, worth ½ ton per fm. In the 65, driving east of Judd's shaft, the lode is small and unproductive.

**NERBUDDA COAL AND IRON.**—Coal Raisings for December: Output, 2393 tons 3 cwt. 2 qrs. 16 lbs.; sales, 2077 tons 5 cwt. 3 qrs. 16 lbs.; consumption 315 tons 18 cwt.

**NEW EMMA SILVER.**—George Cullins, Jan. 2: Progress since letter of 26th ult. is:—East level advanced 13 ft.; distance from incline, 269 ft.; a very slight favourable change in face, though rock continues hard. The rise is now 28 ft., having raised 8 ft. since report of 26th ult. Appearances about same. North-west level advanced 15 ft.; total distance now 23 ft.; is looking very favourable in face.

**ORGANOS GOLD.**—J. G. Green, Nov. 30: Monthly Report: Owing to rainy season no mineral could be carried from Socorro to the mill. At Constance open-cast we had a very heavy fall of ground owing to the heavy rains, completely covering the surferous hills we had been working, and to which I have referred to in former reports. For these reasons no stamping has been done for the month. At Socorro about 50 tons of good mineral has been extracted during the month, calculated to contain about 55 ozs. of gold, and awaits a change in the weather so that the mules can begin carrying same. A party of men has been busily employed all the month with tram wagons leaving the fall of stuff at the Constance open-cast above referred to, and I expect that we shall be able to get at the mineral again next week. About 20 tons of good quartz has been obtained from the stops in Buena Ventura, calculated to contain about 20 ozs. gold. The Buena Ventura level has been driven 2 fms. in killas, carrying a small branch of quartz, but not to value. It will be seen from the above that our estimated raisings for November are equal to about 75 ozs. of gold. Advantage has been taken at the mill of the stoppage to thoroughly overhaul

the bank under the turbine cistern, which for some time has been in an unsafe condition, has been shored up and secured. A lot of sheet-iron boxes have been made for carrying the Socorro mineral on mules instead of the raw-hide bags, which soon spoil and get rotten if wetted at all. We will commence crushing on Dec. 3, and I calculate that we shall obtain about 150 ozs. during the month (December). The lode at Socorro presents a most promising appearance, being encased between two good solid walls. A large quantity of mineral can be obtained from here once it is opened up a bit. I dispatched the bar No. 9, 145 ozs., valued at \$2600, on the 9th inst., and now beg to enclose accounts for October. As will be seen the working profits for October, including the 22 ozs. of gold in hand, are \$1071.40. I intend making the November and December accounts together for the reason that there is no mill return for this month.

**PESTARENA UNITED.**—Wm. Roberts, H. P. Clunes, Jan. 17: The 33 end, north on No. 5 lode, is in micaceous rock, with a little mineralised matter on the footwall. The 65 end south still shows a very contracted lode in sterile rock. The 90 north carries a little low grade pyrites on the footwall, with a vein of pyrites on the eastern side, apparently dipping before the end; yield, 6 tons per fathom, at 7 dwt. per ton. No. 1 Lode: The 110 end south is in massive micaceous rock, carrying a good hanging-wall, but without ore. The cross-cut at the 110 progresses favourably, considering the hardness of the rock. In the 130 north the lode is still small, at present yielding 3 tons per fathom at 10 dwt. The 130 south continues much the same as when last reported, yielding 2 tons per fathom at 9 dwt. per ton. In the Incline shaft the lode is composed of calcareous quartz and schist, with batches and veins of pyrites, and is of a promising character; the present yield is 6 tons per fathom, at 9 dwt. per ton. The stopes in the aggregate are somewhat less productive than at the commencement of the month. At Cavone we have suspended operations for the present, as the amount of timber on hand is very small. The water supply has much decreased during the past fortnight, and consequently we are compelled to shut down six mills in the upper house. We have started the jiggling machinery, and after making a few alterations, to adapt it to the class of ore, we trust to obtain satisfactory results. Judging from the advanced stage of the season, we strongly fear that unless a fall of snow occurs very shortly we shall be unable to bring out the timber and millstones to the mine this year.

**Vale Toppa.**—W. Roberts, H. G. Gifford, Jan. 15: At the No. 1 level, south on new lode and slide, the slide has resumed its former dip, and the lode, after passing through very unsettled ground, has divided into two distinct branches—one above the slide going off to the west, and one below taking an easterly direction. Driving is continued on the western branch, which is the stronger of the two, and being above the slide, gives greater promise of continuance. The yield is about 3 tons per fathom, at 8 dwt. The rise in the back of No. 1 level, on new lode, at a distance of about 9 metres up from the back of the level, the lode seems to die out in the schist, but there still remains a portion of the lode; and in a few days we shall be able to see whether this also cuts out or not. In the end driving on the branch, east from No. 1 level, the lode has much improved since driving was first commenced on it from the cross-cut. It has a regular footwall, and shows good patches of pyrites in places. In the back of the lode is rather small, but in the bottom of the level it is over 2 metres wide, and we have now started a cross-cut from the bottom of the winze to prove the continuity of this lode in depth. If it holds down, we ought to intersect it within a few metres. The cross-cut west from bottom of winze, under No. 1 level, has got out of the ore-bearing rock into stiff, close schist, and is now suspended, the men being put to cross-cut east, as mentioned above. The flat stop east of No. 1 level is very poor, and in places the quartz is mixed with schist, but the other stopes continue to yield their usual quantity of ore.

**PIERREFITTE.**—Manager, Jan. 21: South Mine: The south-east end, No. 1 adit, is without any change. The miners who are at work, however, have for some few days been putting in a cross-cut in the footwall of the lode in the bottom of the stopes below No. 1 adit level. They have cut in about 6 ft., and find nothing but schist. We shall continue to cross-cut a little more, so as to be quite sure we have taken all the lode away at these stopes. In the same level south-east we have put two men to break some of the lode under the chimney, but we find that place both hard and sterile; we intend to keep these men there until the ground is thoroughly proved. These men we have taken from the bottom stopes in the north mine. We are still cross-cutting the lode in the intermediate level south-east, and we find the nearer we get to the hanging part of the lode the easier we find it for breaking. Lately we have cut into some good veins with a little lead, and I am hoping it will still get better. When we reach the hanging-wall we intend to drive on the course of the lode again. The lode altogether is, so far, at least, 3 fathoms wide here. The part of the lode in which we have been driving the opposite side of the slide (intermediate north-west) has become so hard that the men can make scarcely any progress; this driving is close to the footwall. Seeing this, I carefully examined the hanging part of the lode, and put the men to drive on it. I am pleased to say that the ground is much easier for breaking there, and the lode itself is much richer than it is near the foot. We shall continue the drivage here for some time at least. The lode in the south-east and No. 2 adit is without much change from what it has been during some weeks past. On the opposite side, north-west, we have been opening out on the sides of the level in search of the lode, and should we not soon find it, I am persuaded that the best course to adopt will be to stop all cost at this point, and wait till the surface level is into the lode. This surface level will prove where the lode is.—North Mine: The lode in the stopes is still good, and will pay well for breaking. The end, No. 2 level, is being pushed on as fast as possible, but the ground is so hard that really little progress can be made. We expect soon, however, to have softer ground as we are getting near the slide, which is crossing the lode, and perhaps we may find good ore ground there.

**PITANGUI GOLD.**—T. S. Treloar, Dec. 4: The produce for November amounts to 902 tons. In the latter half of the month a falling off has taken place in the Nos. 2 and 3 stopes in the Jose Candido section; the ground, in the first named especially, becoming harder and less productive, hence, the low produce compared with that for October. In the other stopes there is no change to note. Operations in the bottom of Holland's shaft were resumed on the 28th ult., but in consequence of water, 3 ft. only could be sunk. The 30 has been advanced 6 fms., thus bringing the end up to within 14 fms. from the line of the stopes. The ground continues favourable. It has been necessary during the month to execute extensive repairs to the timber work, which is much decayed, and further repairs are urgently needed in the Ouro Preto shaft and the main levels, particularly the adit and the 35.

Dec. 19: The produce for November from the treatment of 101 tons of mineral raised during the month amounted to 902 tons, gold, or 8½ tons per ton, worth, at \$5.6d. per oz., 353.75. The estimated cost for the same month, at Exchange at 21½d., amounted to 436.15. 10d., leaving an estimated loss for the month of \$32. 8s. 10d. Mr. Treloar states:—I am sorry to show a balance on the wrong side again, and fear the result for the current month (December) will be still more unfavourable, since there is a further depreciation in the value of the veins, the produce obtained to the 16th inst. not exceeding 241 cts. Stopping operations during the past fortnight have been confined to the Nos. 1 and 3 stopes in the Jose Candido section, and in both there are indications that water is not far distant. The ground has continued hard and the veins comparatively poor, as evidenced by the small quantity of gold obtained. In the No. 2 stope, which will now be proceeded with, we have still some 4 fms. of ground available above water. At the 30 the end has become much harder than it has been for some time past, and the progress being made is slow compared with the rate for last month. The water also has fallen off, in fact the back of the level is quite dry, although stopes only a few fathoms apart are stopped in consequence of water. Probably, however, the present channel of hard close ground will not be of long duration, and as soon as the end passes through it the stopes above will be rapidly drained. But in view of the contingency of the drainage not proceeding quickly enough to enable us to raise sufficient gold to meet the expenditure, I should be glad to have instructions from the directors as to what course must be adopted.

**POTOSI.**—Telegram: All lodes at Peru are now being worked, and show satisfactory results with good prospects for the future.

**RHODES REEF GOLD.**—Manager, Dec. 31: On account of the holidays we have not made the usual progress with our work; No. 1 tunnel has been driven 6 ft.; No. 4, 6 ft.; and No. 3, 6 ft. The new tunnel which I started on a reef below the mill 10 days ago is in 24 ft. This reef contains a little gold and some promising looking quartz. No. 1 tunnel has a chance of striking a good reef. Nos. 3 and 4 have but little faith in now, as, with the drive, we have passed the line on which I had hoped to strike the reef; but as the portion of the reef upon which we are working may have slid down the hill, and altered its original position, I think we are justified in driving for a few more weeks.

**RICHMOND CONSOLIDATED.**—Telegram, Jan. 22: Week's run (one furnace), \$16,000, from 233 tons of ore; refinery, \$17,000.

**RUBY AND DUNDEBERG CONSOLIDATED.**—Dec. 35: Dunderberg:

Home Ticket: The upraise above the north cross-cut from the bottom drift has been advanced 8 ft. during the week, at which point the ore assumed a horizontal position, and is now connected with the stopes above and north of third level. The ore at this point is nearly exhausted. The south drift from the bottom level has been advanced 6 ft. during the week without any change, total, 22 ft. The stopes at the end of the south drift, third level, near the incline, are producing nearly all the ore extracted at present. The stopes on third level north, do not look quite so well, the ore being low grade. The south orebody between the first and second levels is very poor at present, producing little or no ore of value. Have shipped 97 tons ore this week and have 21 men at work.—Lord Byron: The cross-cut from the end of the tunnel continues without any change; progress this week 6 ft. total, 482 ft. Grigg and Co.'s cross-cut to the Valentine shaft has been advanced 4 ft.; total, 63 ft. from the tunnel.

—Telegram, Jan. 22: 92 tons ore shipped and 145 tons smelted, realising net

3131.

**SANTA BARBARA GOLD.**—T. S. Treloar, Dec. 4: The mineral treated at the spalling-floors during November was 840 tons, of which 34 tons were rejected, and \$14 tons stamped. The

The Railways of the Company are under Special Subsidy from the Secretary of State for India in Council as hereinafter mentioned.  
**ASSAM RAILWAYS AND TRADING COMPANY (LIMITED).**

Incorporated under the Companies Acts.

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P. C. LECKIE, Esq., Messrs. Durand and Co., Deputy-Chairman.

THOMAS BARNES, Esq., Director Lancashire and Yorkshire Railway.

EVAN A. JACK, Esq., late of Calcutta.

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J. BERRY WHITE, Esq., Chairman Jokai (Assam) Tea Company, late of Assam.

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The debentures are secured by a mortgage, and are a first charge on the railways with their rolling stock and plant (including the subsidy of the Secretary of State in India in Council), the flotilla of river steamers, &c., and the collieries and other valuable concessions of the company, but subject to any unconverted portion of the £19,400 debentures already issued, which are secured by mortgage on the railways and subsidy only.

PROSPECTUS.

The Assam Railways and Trading Company (Limited) was formed in 1881 for the purpose of carrying out certain concessions for the numerous tea plantations, and connecting the River Brahmapootra construction, under a subsidy from the Secretary of State for India in Council, of railways in Assam, about 79 miles in length, traversing the with Talup and the rich coal district of Makum, and for other purposes, amongst which is the establishment of a service of steamers and lighters upon the River Brahmapootra.

The railway concessions are in perpetuity, the Government having, however, the option of purchasing the railway and rolling stock and other equipments at the expiration of the first five years from the date of opening the main line and branch, and at the end of every subsequent period of five years, paying the company 20 per cent. in excess of its value as a dividend-paying investment.

By the same concessions a subsidy is given by the Secretary of State for India in Council for 20 years from the opening of the railway and branch line, respectively, of an amount not exceeding in the whole 100,000 rupees per annum, viz.:—80,000 rupees in respect of the main line to Talup, and 20,000 rupees in respect of the branch to Makum.

In the event of the net earnings yielding a return of 5 per cent. per annum upon the cost of construction the Government subsidy will not come into operation. Should the net earnings not give a minimum return of 5 per cent. per annum, the Government subsidy will then be available to an extent not exceeding in the whole 100,000 rupees per annum. Upon the opening of any section of the railway the Government subsidy accrues in respect thereof *pro rata*.

The option of purchase applies to the railway only and not to the other property of the company.

Of the main line 39 miles from the Brahmapootra river to Makum junction were opened for public traffic on the 16th July, 1883, and the Government subsidy has accrued since that date in respect thereof. The remainder of the main line was opened for goods traffic in September last, and will shortly be completed for passenger traffic. The Makum branch is completed for the carriage of coal and merchandise, and will be opened for passenger traffic in March next.

A Government departmental report recently issued, referring to Makum coal fields, states that "these coal measures in thickness and quality of coal are among the first in the world, and are practically inexhaustible," and the mining engineer of the company in his report made in November last to the Indian Government, at their request, estimates the quantity at 120,000,000 tons above the natural drainage and easily workable. The present price of coal at Dibrugarh and other coaling stations on the Brahmapootra river is from 35s. to 40s. per ton. The company will be able to deliver their coal at these stations at a price well within these figures, and realise a considerable profit per ton.

With the present limited facilities 2000 tons of coal can be raised weekly; an estimated profit of 10s. per ton on this moderate output would yield £50,000 per annum, which independently of other sources of profit is more than three times the amount of interest on these debentures.

The debentures are repayable 1st January, 1904, but the company retains the option of repayment on 1st January, 1889, or on the 1st January in any subsequent year, upon giving six months' notice to the holders thereof.

Issue price, par—payable as follows:—

£5 per cent. on Application.

25 " Allotment.

20 " March 15th, 1884.

50 " April 15th, 1884.

£100

Non-payment of instalments at dates on which they fall due renders all previous payments liable to forfeiture.

Scrip certificates to bearer will be issued in exchange for bankers' receipts and letters of allotment.

The coupon payable 1st July, 1884, will be for £1 15s. This and future half-yearly coupons will be payable at the company's bankers.

Payments in full may be made on allotment, or on the 15th March, 1884, under discount at the rate of £4 per cent. per annum.

The debenture will be issued payable to bearer, but can at any time be registered at the option of the holders.

Copies of the concessions, together with the Memorandum and Articles of Association of the company, and the mortgage deed, can be seen at the offices of the company, and of the solicitors, Messrs. R. S. Taylor, Son, and Humbert, 4, Field-court, Gray's Inn, W.C.

Applications for the above debentures must be made upon the annexed form to the bankers of the company, the Agra Bank (Limited), 35, Nicholas-lane, London, E.C.

The LIST OF APPLICATIONS WILL CLOSE on or before TUESDAY, the 29th instant.

Copies of this prospectus, with form of application, may be obtained from the Secretary at the offices of the company, 1, Tokenhouse Buildings, London, E.C.; or of Messrs. Laurie, Milbank, and Co., 22, Threadneedle-street, London, E.C.

London, 23rd January, 1884.

No..... FORM OF APPLICATION.

THE ASSAM RAILWAYS AND TRADING COMPANY (Limited).

Issue of £250,000 Six per Cent. Debentures.

To the Directors of the Assam Railways and Trading Company.

Having paid on you account to the Agra Bank (Limited), the sum of £ being a deposit of 5 per cent. on £ debentures of your company, hereby request that you will allot £ debentures, and agree to accept the same, or any less amount that may be allotted to and to pay for the same on the terms and conditions of your prospectus.

Signature.....

Name in full.....

Description.....

Date of application... Address.....

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of a quality much superior to the foreign article. Also supply Safety Fuse and Electric Firing Appliances of best description.  
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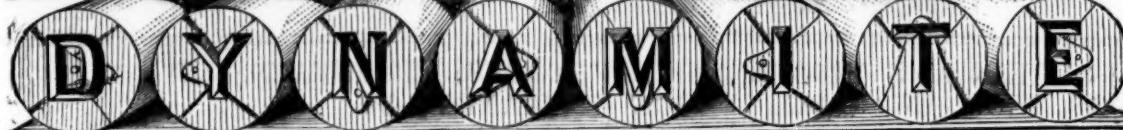
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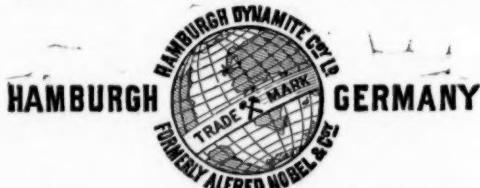
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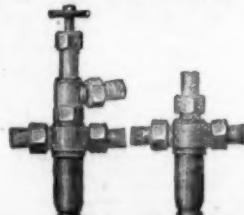
The cheapest and most economical.

Can be cleaned in a few minutes.

All parts made to gauge.

Made entirely of best gun metal.

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Has no moving parts.

Will not shake off.

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**PACIFIC IRON WORKS**

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For Copper and Argentiferous Galena Ores.

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The Pacific Water Jacket Smelters embrace many features that are entirely new and of great practical utility, which are secured by letters patent.

No other furnaces can compare with these for durability, and in capacity for continuous and interrupted work.

More than One Hundred

of them are now running in the various mining districts of the United States, giving results never before obtained as regards continuous running, economy of fuel grade and quality of bullion produced.

These Smelters are shipped in a complete state, requiring no brick or stone work, thus saving great expense and loss of construction.

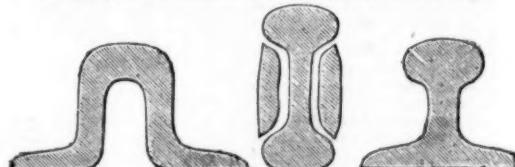
Complete smelting plants made to order, with all the improvements that experience has proved valuable in this class of machinery. Skilled and experienced smelters furnished when desired to examine mines and to superintend constructing and running of furnaces Estimates given upon application. Send for circular.

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This manufacture embraces all the latest improvements for use in Blasting in Mines, Quarries, or for Submarine Purposes ; and is adapted for exploding Gunpowder, Dynamite, or any other Explosive ; and is made suitable for exportation to any part of the world. Price Lists and Sample Cards on application.

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J. JACKSON, Manager.

## THE MINING SHARE LIST.

## BRITISH DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
3200 Blue Hills, f., St. Agnes	4 11 6	34	34	0 4	0 2	May 1881
6000 Carn Brea, c., Illogan	12 12 11	134	134	32 11	8	0 10
40000 Craignant Bach, f., Cardigan	5 0 0	—	—	0 5	0 5	Nov. 1881
1024 Devon Gt. Consols, c., Tavistock	1 0 0	34	34	119 7	0 0 8	Dec. 1880
4700 Dolcoath, c., Camborne	12 10 10	625	60 51	35 6	0 10	Dec. 1880
6400 East Pool, c., Illogan	0 9 9	34	34	37 19	6 0 18	Dec. 1883
12000 Great Holway, f., Finsbury	5 0 0	—	—	0 12	8 0 7	Sept. 1883
15000 Great Laxey, f., Isle of Man	4 0 0	12	10	10 1%	25 15	0 0 5
6400 Green Hurth, f., Durham	0 0 0	75	75	75 14	4 18	0 0 5
9830 Gunnislake (Clitters), f.	2 2 2	14	14	0 19	9 0 2	Mar. 1882
2800 Isle of Man, f., Isle of Man	25	85	85	85 5	0 0 8	Sept. 1880
8000 Killifirth, f., Chacewater	4 3 3	8	14	56 13	0 1 8	Oct. 1882
20000 Leadhills, f., Lanarkshire	6 0 0	23	23	5 0 5	0 0 5	Sept. 1883
4000 Leisburn, f., Cardiganshire	15 15 0	0	0	615	0 0 10	Sept. 1883
10000 Mellinacar, c., Hayle	2 0 0	24	24	2 0	3 0 0	Jan. 1884
9000 Minera Mining Co., f., Wrexham	5 0 0	63	56	69 9	0 1 6	Aug. 1883
20000 Mining Co. of Ireland, c., f.	7 0 0	—	—	24	0 0 2	Jan. 1880
11829 North Hendre, f., Wales	2 10 0	—	—	3 18	0 0 4	Nov. 1882
8146 Ditto	1 5 0	—	—	0 11	3 0 2	Nov. 1882
2000 North Levant, f., St. Just	13 0	—	—	0 14	0 0 3	Feb. 1883
4768 Penhalls, f., St. Agnes	4 5 0	0	0	34	34	0 1 6
12090 Phoenix United, f., Linkinhorne	6 0 0	3	14	7 17	8 0 1	Jan. 1881
12000 Roman Gravels, f., Salop	7 10 0	0	0	54	9 11	0 0 5
58000 South Cadron, c., St. Cleer	1 0 0	0	0	75	75	—
6123 South Condurrow, c., Camborne	7 5 7	9	9	9 10	10 15	0 0 10
9000 South Darren, f., Cardigan	1 10 0	3	34	0 4	0 0 2	Apr. 1880
6000 Tincroft, c., Pool, Illogan	13 12 6	2	14	2 51	3 0 5	Dec. 1881
15000 Van, f., Llanidloes	4 5 0	0	0	34	34	0 0 2
15000 West Holway, f., Finsbury	1 0 0	1	34	0 5	0 0 1	Oct. 1881
6000 West Rasset, f., Illogan	7 10 4	2	14	2 28	3 0 8	Sept. 1882
6000 West Kitty, f., St. Agnes	0 12 0	13	124	13 1	1 0 11	Nov. 1882
12000 Wheal Croesor, f., Tavistock	2 4 0	—	14	1 3	0 0 2	Sept. 1883
1624 Wheal Eliza Consols, f., St. Austell	18 0	0	—	59	0 1 0	Nov. 1883
6206 Wheal Grenville, f., Camborne	1 0 0	8	54	54 15	0 0 2	Dec. 1883
4295 Wheal Kitty, f., St. Agnes	5 12 0	24	34	2 18	6 0 1	Jan. 1881
3200 Wheal Pever, f., Redruth	12 1 0	2	14	8 13	6 0 4	Mar. 1882

## FOREIGN DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500 Alamillos, f., Spain	2 0 0	0	14	14	3 13	0 0 3
130000 Almada and Tirito Consols, f.	1 0 0	0	14	2 14	0 1 0	May 1876
20000 Australian, c., South Australia	7 7 5	3	23	1 9	6 0 2	Aug. 1883
15000 Birdseye Creek, f., California	4 0 0	0	14	1 5	0 0 1	Jan. 1884
30000 Bratberg, c., Norway	2 0 0	0	24	2 0	3 2 0 1	24 Sept. 1883
130002 California, f., Colorado	1 0 0	0	34	34	0 2 0	Oct. 1883
20000 Cape Copper Mining, f., South Africa	8 0 0	43	42	44	5 7 6 1	0 0 0
65000 Colorado United, f., Colorado	5 0 0	23	23	0 14	6 0 1	May 1883
50000 Copiapo, c., Chile (24 shares)	3 10 0	0	34	2 14	3 0 3 0	Dec. 1883
70000 English & Australian, f., S. Aust.	2 10 0	0	—	3 2 9	0 2 0	Mar. 1883
2000 Eng.-Aus., f., Victoria*, pref. (20000 o.)	0 0 0	—	—	0 3 8	0 3 8	Apr. 1882
25000 Fortuna, f., Spain	2 0 0	0	34	34	8 8 3 0	Sept. 1883
72000 Frontino & Bolivia, f., New Gran.	2 0 0	0	14	14	0 12 0 1	Dec. 1883
270000 Henriett, f., Leadville, Colorado	1 0 0	—	—	0 0 9	0 0 5	Feb. 1883
200000 La Plata, f., Leadville	2 0 0	0	75	34	0 12 11	0 1 3
5000 Linares, f., Spain	3 0 0	0	34	34	19 7 4	0 0 3
20000 Marbella Iron Ore, f., Spain	10 0	4	34	34	0 10 0 0	June 1882
185164 Mason & Barry, f., Portugal	19 0	0	134	134	0 3 0 0	Oct. 1883
80659 Quebrada Rail Land & Cop. Venezuela	10 0	0	5	54	6 0 6	6 per cent.
50000 Panuello, c., Chile	0 0 0	6	54	6 0	1 18 9 0 3	Nov. 1883
25000 Pataquai, f., Brazil (in. \$600 £1 pd.)	0 10 0	—	—	0 1	0 0 1	Sept. 1880
1400 Pontefract, f., France	29 0	0	8	8	30 3 1	0 0 11
160000 Port Phillip, f., Clunes* (82 shares)	1 0 0	0	34	34	1 14 2 0 0	Oct. 1881
50000 Rare Fortune, f., Argent. Republic	1 0 0	—	—	0 3	0 0 1	July 1882
84000 Richmond Consol., f., Nevada	5 0 0	0	43	4 4	14 16 8 0 5	0 0 5
24532 Riu Tinto, f., Mortgage Bds., Huelva	10 0	0	103	101	103 5 per cent.	July 1880
252000 Ditto, shares	10 0	0	204	194	204 2 16 0 0 16	May 1883
40000 Santa Barbara, f., Brazil	0 10 0	—	—	0 12	9 0 1	May 1882
120000 Scottish-Australian Mining Co.*	1 0 0	0	23	23	15 p. cent. 0 1 6	Nov. 1883
80000 Ditto, New	0 10 0	0	14	14	15 p. cent. 0 0 9	Nov. 1883
225000 Sierra Buttes, f., California	2 0 0	0	14	14	15 p. cent. 0 0 1	Sept. 1883
40625 Ditto, Plumasureka	2 0 0	0	14	14	15 p. cent. 0 0 2	Oct. 1883
223000 St. John del Rey* (65 Stock and multiple dealt in) 92 100	0	0	—	5 p. cent. for half-year	June 1882	
160000 Tambracherry, f., Wynand	1 0 0	0	—	0 0 8 0 0 6	Aug. 1882	
82500 Tharsis, f., ral., Spain (587300 issued)	1 0 0	0	7	8 18 6 0 11	May 1883	
26000 Tolima, f., Colombia (A & Bahres)	5 0 0	0	63	6 7 3 6 0 10	Jan. 1884	
25000 Victoria* (London), g., Australia	1 0 0	0	—	0 13 10 0 0 8	Feb. 1881	
100000 Victorian (Nevada, U.S.) Deb. Bds.	1 0 0	0	—	0 2 0 0 0 6	June 1882	
35000 Western Andes, f., Colombia	5 0 0	0	54	54 54 4 5 9 0 2 2	Oct. 1883	
2100 W. Prussian (5500 pref. sh. £10 pd.) 10	0 0 0	75	5 75	4 2 0 0 0 8 0 0 4	Apr. 1881	
54800 Yorke Pen., f., South Aust. Pref.	1 0 0	0	34	34 34 0 3 0 3 0 3	May 1882	

\* Have made calls since last dividend was paid.

## NON-DIVIDEND BRITISH MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Paid.	Last wk.	Clos. pr.
25000 Aberdura, f., Denbigh	1 10 0	0	14	14	14	14
12000 Anderton, f., c. 4, Devonshire	1 2 0	0	14	14	14	14
12000 Asheton, f., c., Carnarvonshire	5 0 0	0	—	—	—	—
12000 Bedford Unit., f., c., Tavistock (21 sh.)	0 14 0	0	14	14	14	14
30000 Bodidris, f., Isle of Man	1 0 0	0	—	—	—	—
30000 British, * f., b., Wrexham	1 0 0	0	—	—	—	—
20000 British Manganese Company	1 0 0	0	—	—	—	—
30000 Bruno Consols, * f., Flintshire	1 0 0	0	1	2	2	2
20000 Builth United, f., c., Cardigan	1 0 0	0	—	—	—	—
12000 Cilgerran Consols, c., bl., Lamerton	0 2 0	0	—	—		